

MUSICAL INTENTIONALITY:
BETWEEN OBJECTS AND MEANING

A Dissertation

Presented to the Faculty of the Graduate School
of Cornell University

In Partial Fulfillment of the Requirements for the Degree of
Doctor of Philosophy

by

Mike Cheng-Yu Lee

February 2016

© 2016 Mike Cheng-Yu Lee

MUSICAL INTENTIONALITY:
BETWEEN OBJECTS AND MEANING

Mike Cheng-Yu Lee, Ph.D.

Cornell University 2016

How do the physical realities of bodily gestures, instrumental and other technologies relate to musical meanings as constructed by humans? What enables such relations, and on what terms do we analyze them? These questions parallel those in the philosophy of language: how does the physical manifestation of a speech act—whether as the pure sonic phenomenon of an oral utterance or as physical markings on paper—refer to human constructed meanings?

The dissertation takes as axiomatic that any human interaction with the material world as well as any subsequent relations between materiality and meaning are mediated by the active neurobiological processes which give rise to human agency. Though manifested in endlessly flexible ways, I argue that these relations are nonetheless bound by a set of logical structures derived from how we relate to the world more generally through intentionality—the capacity of consciousness to be about states of affairs beyond itself.

In **Part I**, I develop a series of arguments that shows how intentionality structures the ways in which aspects of musical materiality relate to musical meaning. **Part II** then explores these structures creatively in three case studies.

As a whole, the dissertation aims to demonstrate that creative acts such as music-making partake coherently within the logical structures of the physical and biological world of which they are a part. It thus aims to establish, in the wake of the material turn, a new framework from which to explore musical meaning both creatively and rationally in any and all contexts regardless of historical and cultural differences.

BIOGRAPHICAL SKETCH

Awarded Second Prize and Audience Prize at the 2011 *Westfield International Fortepiano Competition* by a jury that included Robert Levin and Christopher Hogwood, New Zealand pianist Mike Cheng-Yu Le performs on pianos that span the eighteenth century to the present. Mike has recently held a week-long residency appearing with the New World Symphony at the invitation of Michael Tilson Thomas. As a chamber musician, Mike has collaborated with musicians including Joseph Lin (Juilliard String Quartet), Clancy Newman, and the Formosa Quartet, among others, that integrate modern and period instruments. As a historically informed performer and scholar, he has given lecture-recitals and presentations on issues of musical form, Schenkerian analysis, Lewinian transformational theory, and musical embodiment at a number of conferences, including the *Society of Music Theory* and the *European Music Analysis Conference*.

Mike is Visiting Assistant Professor at the Jacobs School of Music, Indiana University-Bloomington and has previously served as Lecturer of Music Theory at Yale University. More recently Mike guest taught at Ithaca College and the University of Michigan-Ann Arbor. Mike studied at the Yale School of Music and holds a Ph.D. in musicology from Cornell University. His teachers have included Malcolm Bilson, Boris Berman, Michael Friedmann, and James Webster.

TABLE OF CONTENTS

Acknowledgements	i
------------------	---

PART I: THEORY AND METHODOLOGY

INTRODUCTION	1
CHAPTER ONE: A Theory of Musical Intentionality	25
CHAPTER TWO: Towards an Analytic Methodology	52

PART II: ANALYTICAL ESSAYS

CHAPTER THREE: Bowing Gestures and Structural Rhythm in Haydn's String Quartet Op. 64 No. 3	78
CHAPTER FOUR: Tempo and Processual Form in Schubert's Piano Sonata Op. 42	101
CHAPTER FIVE: The Meanings of Chopin's Silent Chord	120
CONCLUSION	144
Works Cited	148
Appendix: Examples and Tables	

ACKNOWLEDGEMENTS

I wish to thank here not only those who have contributed to this project, but also those who have shaped my artistic and intellectual development during my time at Cornell.

First and foremost, I wish to thank my academic advisor, James Webster. The ways with which he derives tremendous musical insights through the intensity of his logical thinking are a constant source of inspiration. He was instrumental in switching me from the D.M.A. to the Ph.D. program, the outcome of which allowed me to pursue and ultimately accomplish my various goals at Cornell in the sequence that I could. Although I accept full responsibility for all of the ideas presented here and any remaining misconceptions, his critical and careful reading of every sentence, footnote, and diagram has been indispensable. Words fail to capture my gratefulness for his generosity, unfailingly honest and caring guidance, and warm friendship during this period; I look forward to many more years of our musical and personal association.

I arrived in Ithaca with the singular hope of becoming Malcolm Bilson's student and this master-apprentice relationship has been, and will remain, the most important of my musical life for it changed the course of my music making. For eight years I had the privilege of witnessing on a daily basis the depth of his artistry. Etched permanently into my memory is the originality, refinement, and seeming inevitability with which he renders countless passages during our work together. He would undoubtedly deny that the

contents of this dissertation have much to do with what he does, yet his musical influence on me is reflected in the deepest possible ways throughout. Though his intuitive connection with instruments is a marvel, he taught me above all the centrality of inner listening and to nurture it not through indulgence in imaginative abandon, but through the cultivation of that most elusive of notions, taste. I remain forever indebted to him for sharing with me his incredible artistry—it remains a guiding benchmark that I will always carry within me.

I wish to thank Steven Stucky for not only being a core member of the committee and imparting his careful reading of the document, but also for how he has inspired me throughout my time at Cornell by way of both his music and his written prose, and offering me a much treasured personal relationship. His seminar on Lutosławski was a revelation in how much more directly a great composer's mind can penetrate that of another without recourse to complex theoretical constructs. I can only hope to have inherited traces of his marvelously intuitive connection with music in my own work. I am extremely grateful that Steven Rings so enthusiastically joined the committee midway through the project. His keen and thorough engagement with its central arguments and musical analyses resulted in critical feedback that improved the project in all of the crucial conceptual junctions. He brought his typical intellectual elegance, analytic imagination, and good judgment to bear on my thinking, traits that I have long since witnessed and admired since our days as graduate students at Yale.

In addition, I owe gratitude to several other members of the Cornell music community. I wish to thank Roger Moseley for generously letting me audit two of his graduate seminars—"Nineteenth-Century Virtuosity" and "Keyboarding". His conceptual framing of the contents of these seminars helped clarify and subsequently focus the foundational arguments of this dissertation at a time when they were intuitions desperately in need to be formalized. Neal Zaslaw's presence around the department was a constant reminder of the importance to question established wisdom while reading all texts with musical heart and ears. I cannot express how much it has meant to me to be invited to his office on a regular basis to speak about our mutual projects and to listen to performances together. Hearing the kinds of searing insight he offered into the thought processes behind performers and their performances remains one of the greatest highlights of my time at Cornell. It also meant a great deal to me that Annette Richards and David Yearsley were consistently supportive and encouraging of my profile as a performer within an academic setting. In turn they have shown me through their own extraordinary examples as performers/writers how these activities might successfully integrate and flourish in such an environment.

Beyond Cornell, Janet Schmalfeldt has been a tremendous influence. In addition to providing some of the most honest and valuable feedback on many of my analytical ideas during their infancy, my association with her since 2009 allowed me the unusual privilege to gain firsthand access into the multiple dimensions of her music making beyond her public writings and lectures. Her unfailingly grounded musicianship persists as a voice of sound

judgment throughout my work as an analyst. Moreover, it is her profile as a performer-scholar and the intense passion with which she communicates about music in both modalities that has inspired me to continue to pursue and refine this difficult profile. It was Michael Friedmann, however, who first saw in me potentials for communicating something of value analytically about music and for relating that in a meaningful way to my core priorities as a performer. After I left Yale, he continued to help me clarify the core purposes and goals of my work, and has an uncanny knack for at times knowing me better than I know myself. The many conversations we had over the phone during the past eight years have reminded me how much I have missed the presence of his company, musically and personally, and how tough it has been to carry forth on my own the high musical values that he extolls.

Finally, I would like to acknowledge here a few select personal relationships that have great meaning for me. Elizabeth Bilson has been, and continues to be, a mother figure. Her warmth, generosity, and wisdom have guided me through many difficult times. Both she and Malcolm made their house truly a home away from home, and I have cherished every moment during the countless dinners I spent there with them. Malcolm and Elizabeth took me into their home in a way that I could not have ever fathomed prior to coming to Ithaca and this continuing association shall remain one of the most central in my life. For as long as I have known them, Angela Early and Damien Mahiet have served for me as models of intellectual rigor and flexibility. Without them, my thinking on many issues, both musical and worldly, would have remained much the poorer; I feel extraordinarily blessed

to have their unfailingly sincere friendship. Even though they remain perplexed ever since I was a child as to what I do and why I do it, I wish to thank my parents, John and Grace Lee, for their constant and unconditional support. Their unusual grace as parents to allow me to chart my own course in life from an early age warrants my deepest gratitude.

Finally, I thank Ji-Young Kim for her love and patience. I dedicate this modest work to her as a small token of my gratitude.

INTRODUCTION

During the past decades musicology has witnessed a paradigm shift, from approaching musical works as autonomous entities towards approaching music as a network of human practices. The principal new belief was that artistic meanings are not inherent in fixed works but are products of human agencies and their culturally constructed practices. In this view, various musical activities—including performance, improvisation, composition, and perception—provide alternative foci for aesthetic and hermeneutic reflection. In more recent years, the continued development beyond the text and the textual has seen the emergence of a new research paradigm that further shifts the sites of interpretation beyond human intentions onto aspects of what is called materiality. Broadly defined, materiality can refer to physical objects, man-made technologies (such as instruments), as well as products of embodied actions—the last can be considered as physical objects like any other in the world. On this material and technological turn in musicology, Emily Dolan has recently noted that

Increasingly, musical technologies are what hold our fascination, are the objects that demand analysis, explanation and contextualization. This disciplinary turn seems to signal not only the abandonment of traditional aesthetic concerns, but also a reversal of the musical values that have dominated since the nineteenth century...One might say, therefore, that research of this kind *replaces* the aesthetic objects of traditional musicology with technological ones.”¹ [my emphasis]

¹ Emily Dolan, “Editorial,” *18th-Century Music* 8/2 (2011): 176.

Critical Organology, as the new research paradigm has recently identified itself,² explores how materiality engenders musical-aesthetic discourses across historical contexts and studies how humans interact with materiality in both musical and non-musical practices. The notion of “instrumentality,” for instance, is defined by Dolan as “the relationship between music and those technologies that enable its production”; technologies (as a subset of materiality) are hence understood as doing the work of mediation in musical practices.³ Critical Organology therefore raises a

² At the American Musicological Society’s 2013 annual meeting, Emily Dolan organized and chaired a special session entitled “Critical Organology” that featured papers by scholars in the field who had been at the time thinking and writing about instruments, technology, and materiality in musicology and ethnomusicology. In her general description of this field of research (which can be viewed here: <https://sites.sas.upenn.edu/ams2013-criticalorganology/>) Dolan writes: “Instruments, machines, and technology occupy an increasingly central position within musicology. It is now possible to speak of the birth of a “critical organology”: a subfield that blends the concerns of traditional organology—the history and classification of instruments and the exploration of their construction—with broader questions of the impact and implications of technology. A nascent field, critical organology offers new avenues for thinking about the relationships between material history, aesthetics and philosophy as well as for connecting music studies with the histories of science and technology, STS, and sound studies. The purpose of this panel is to explore the aims and scope of critical organology, as well as to consider its role within musicology more generally.” The scholars that were represented in the special session were (in alphabetical order): Joseph Auner, Eliot Bates, James Davies, Jonathan De Souza, Bonnie Gordon, Ellen Lockhart, Deirdre Loughridge, Roger Moseley, and Thomas Patteson. The most lucid outlines of the goals and methodology of this field are to be found in the position papers delivered at this special session as well in Dolan’s co-authored article with John Tresch, “Toward a New Organology: Instruments of Music and Science,” *Osiris* 28/1 (2013): 278-98. In addition I mention here a selection of other writings (several of which by the scholars named above) that similarly feature technology and materiality as their subjects of enquiry: Emily Dolan, “Toward a Musicology of Interfaces,” *Keyboard Perspectives* 5 (2012): 1-12; Bonnie Gordon, “The Castrato Meets the Cyborg,” and “A Note from the Guest Editor,” *Opera Quarterly* 27/1 (2011): 94-122 and 1-3; Deirdre Loughridge, “Haydn’s *Creation* as an Optical Entertainment,” *The Journal of Musicology* 27/1 (2010): 9-54; Gundula Kreuzer, “*Wagner-Dampf: Steam in Der Ring des Nibelungen* and Operatic Production,” *The Opera Quarterly* 27/2-3 (2012): 179-218; Jonathan De Souza, “Musical Instruments, Bodies, and Cognition” (Ph.D. diss., University of Chicago, 2013); Roger Moseley, “Digital Analogies: The Keyboard as Field of Musical Play,” *Journal of the American Musicological Society*, 68/1 (2015): 151-228; Moseley, “Playing Games with Music (and Vice Versa): Ludomusicological Perspectives on *Guitar hero* and *Rock band*,” in *Taking It to The Bridge: Music as Performance*, eds. Nicholas Cook and Richard Penttengill (Michigan: University of Michigan Press, 2013), 279-318; Eliot Bates, “The Social Lives of Instruments,” *Ethnomusicology* 56/3 (2012): 363-95.

³ Dolan, “Toward a Musicology of Interfaces,” *Keyboard Perspectives* 5 (2012): 11.

host of questions about the role of materiality in the construction of musical meaning that have become central and urgent to historical- and ethno-musicology today. How does materiality relate to traditional notions of musical-aesthetic meaning? More precisely: How do the physical realities of bodily gestures, instrumental and other technologies represent, or make reference to, meanings constructed by humans? What enables such representation in musical (and other) practices? And finally, on what terms do we analyze that relation?

Despite their historical emphases, the various projects of Critical Organology make a shared *ontological* claim about the nature of that interaction. The claim—which resonates with those of the New Materialism, Media and Affect Theories, and Latourian Actor Network Theory, among others⁴—is that materiality harbors intrinsic agencies that actively exert on

⁴ For a select representation of the New Materialism, see: Diane Coole and Samantha Frost eds., *New Materialisms: Ontology, Agency, and Politics* (Durham: Duke University Press, 2010); Barbara Bolt and Estelle Barrett eds., *Carnal Knowledge: Towards a 'New Materialism' Through the Arts* (New York: I.B. Tauris Publishers, 2013); William Connolly, "The New Materialism and the Fragility of Things," *Millennium: Journal of International Studies* 41/3 (2013): 399-412; Bill Brown, "Thing Theory," *Critical Inquiry* 28/1 (2001): 1-22; Janet Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham: Duke University Press, 2010); Manuel De Landa, *A Thousand Years of Non-Linear History* (New York: Zone Books, 1997). For a select representation of Actor Network Theory, critiques, and its application in music studies, see: Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory* (New York: Oxford University Press, 2005); Benjamin Piekut, "Actor Networks in Music History: Clarifications and Critiques," *Twentieth-Century Music* 11/2 (2014): 191-215; Edwin Sayes, "Actor-Network Theory and Methodology: Just What Does It Mean to Say that Nonhumans Have Agency?" *Social Studies of Science* 44/1 (2014): 134-49. For a select sampling of Affect Theory, see: Brian Massumi, "The Autonomy of Affect," *Cultural Critique* 31 (1995): 83-109; Massumi, *Parables for the Virtual: Movement, Affect, Sensation* (Durham: Duke University Press, 2002); Eric Shouse "Feeling, Emotion, Affect," *Media/Culture* 8(6); Melissa Gregg and Gregory Seigworth, eds., *The Affect Theory Reader* (Durham: Duke University Press, 2010); Ruth Leys, "The Turn to Affect: A Critique" *Critical Inquiry* 37/3 (2011): 434-72. For a very select representation of Media Theory, see: Friedrich Kittler, *Gramophone, Film, Typewriter*, trans. Geoffrey Winthrop-Young and Michael Wutz (Stanford: Stanford University Press, 1999); Marshall McLuhan, *Understanding Media: The*

human agencies across a wide array of musical and non-musical practices.

Dolan and John Tresch, when advancing their methodological approach, state that

[Our] approach means that we will be applying concepts to nonhuman objects that are usually attributed to humans. Exploring the different forms and degrees of agency attributed to instruments suggests that the qualities of sentience, activity, and intention might not always belong to only to humans but also to objects often classed as inanimate, including machines and instruments...If instruments are frequently accused of making humans act mechanically, why should we not take seriously instruments' oft-noted lifelike capacities?⁵

Dolan and Tresch's statement captures the views of writers for whom materiality can be understood, rather than as mere objects made up of physical particles, to assume active enabling roles that shape human intentions, and by extension, the artistic meanings that derive from those intentions.⁶ With these assumptions, Critical Organology and related

Extensions of Man (Cambridge, Mass.: MIT Press, 1994); W. J. T. Mitchell, *Picture Theory: Essays on Verbal and Visual Representation* (Chicago: University of Chicago Press, 1994).

⁵ John Tresch and Emily Dolan, "Toward a New Organology," 284-85.

⁶ To cite in addition two examples from writings in the field of musicology: Michael Gallope notes that Benjamin Piekut, in his exposition of Actor Network Theory ("Actor Networks in Music History: Clarifications and Critiques"), observes that for ANT theorists "many objects and non-human actors can be understood to have agency outside the intentionality of individuals." See Michael Gallope, "Why Was this Music Desirable? On a Critical Explanation of the Avant-Garde," *The Journal of Musicology* 31/2 (2014): 225 n. 89. Roger Moseley makes a similar *ontological* claim in "Digital Analogies: The Keyboard as Field of Musical Play" by appealing obliquely to a *historical* practice surrounding Baroque harpsichord inscriptions. Moseley writes on p. 180: "The attribution of a degree of agency to keyboards has a distinguished pedigree in the form of mottoes inscribed on harpsichords and other instruments. Drawing on the classical tradition of epigrams that envoice objects, or *oggetti parlanti*, many such mottoes speak in the first person and are couched in the pedagogical terms of discipline and punishment."

disciplines challenge our commonsensical understanding that human agency has a privileged role in determining meaning in music. It is therefore a feature of such thinking that for instance, as Benjamin Piekut has observed, Actor Network Theory authors' "grammar of agency constantly shifts from active to passive and back again: an actor acts, an actor is enacted."⁷ Such authors, according to Piekut, "are generally more interested in the effects of actions than in their causes."⁸ In Critical Organological writings, one likewise finds similar chiasmic formulations. Roger Moseley, for example (in but one of many instances), calls upon a similar trope when he writes:

... "all playing is a being-played," as Hans-Georg Gadamer phrased it. While keyboards invite us to play music, they have also long been invoked to illustrate how music can "play" us.⁹

Such two-way formulations can be seen to follow logically only when agency is ascribed equally to materiality—and hence materiality's claimed ability to do the work of mediation.

By contrast, although the idea that one-is-being-played- by-the-very-object-one-is-playing might reflect genuine phenomenological experiences on the part of the player, I shall argue throughout the course of this dissertation that this imagined two-way functioning of agency between human and

⁷ Piekut, "Actor-Networks in Music History," 194.

⁸ Ibid.

⁹ Moseley, "Digital Analogies," 152. Although here Moseley is evoking the words of Gadamer, chiasmic constructions that describe the human-materiality relation are symptomatic of his writings in this and other articles. See also Moseley, "Entextualization and the Improvised Past," *Music Theory Online* 19/2 (2013).

inanimate materiality flattens out critical distinctions in terms of their contrasting ontological identities. By neutralizing (and effectively broadening) the criteria for what constitutes agency and action, the chiasmus prevents the identification and understanding of possible enabling resources that engender relations between humans and materiality in the first place. It shifts accountability away from the actions of conscious agents onto inanimate materialities, the latter of which cannot in the end be held accountable, because they are not sentient. The trope thus weakens the usefulness of important concepts such as action and agency, which we need in order to identify the precise origins and workings of historical events and practices. My views here echo in general those of Richard Taruskin, who writes: “Attributions of agency unmediated by human action are, in effect, lies—or at the very least, evasions.”¹⁰ As a result, the chiasmus in effect blocks access to a more nuanced understanding of the *causes* of human and nonhuman interaction and, crucially, of phenomena that lie beyond the reach of immediate phenomenological experience. To cite Taruskin’s recent critique of Latourian Actor Network Theory:

...it is consciousness—or even more broadly, sentience—that defines an agent in my view. Only conscious beings can be active beings. Only conscious action deserves to be called “doing.” Only conscious beings can take responsibility or be held responsible. Otherwise, it seems to me, the concept of *action* is emptied of real

¹⁰ See Richard Taruskin, *The Oxford History of Western Music, Vol. 1: Earliest Notations to the Sixteenth Century* (Oxford: Oxford University Press, 2005), xviii.

meaning or, at the least, strained or diluted (with the concept of *occurrence*) to no good purpose.¹¹ [emphases original]

Latour himself names his inanimate “actors” by their traditional name when he refers to them as implements. He thus shows himself to be perfectly well aware of the existence of implements as a category and the reality of the distinction we draw in our everyday (common sense!) language between actors and implements...Why not acknowledge these distinctions by differentiating these categories in our vocabularies? Are they really so un-meaningful? Do they not make a difference?...I want actors to take responsibility, and I think it a waste of time to argue about whether a gun, a chanson, or a context is a responsible actor. They can still make all the difference they need to make if we call them by more differentiated names: implements, products, ideas, atmospheric or geological conditions, constraints, enablers, and so on and so forth. *Categories are informative. Eliminating distinctions coarsens concepts.*¹² [my emphasis]

Sharing a similar belief in the necessity for refining distinctions, I approach questions of musical materiality and meaning by first outlining the criteria for distinguishing what constitutes agents and non-agents, and from there to delineate the resources that are responsible for engendering potential human and nonhuman relations. My aim is to focus not only on the effects of actions but equally on their causes and resources. The dissertation takes as axiomatic that any human interactions with materiality, as well as any subsequent relations between materiality and meaning, are mediated by the active neurobiological processes which give rise to human (as well as animal)

¹¹ Taruskin, “Agents and Causes and Ends, Oh My,” *The Journal of Musicology* 31/2 (2014): 291.

¹² *Ibid.*, 292.

agency. On the basis of the axiom that in a real-world context such neurobiological processes occur only in biologically based beings, I argue that human agency is not only necessary but sufficient for determining the contents of both sets of relations. From these logically and scientifically oriented perspectives, I regard human biologically based agency, rather than materiality, as the exclusive resource that 1. enables humans' relation with materiality, and 2. enables materiality's relation with meaning.

In **Chapter One** I suggest that the core problems attending to musical materiality and meaning parallel core problems in the philosophy of language, whose principal question is: How does the physical manifestation of a speech act—whether as the pure sonic phenomenon of an oral utterance, as physical markings on paper, or as other kinds of material representation—refer or make reference to human constructed meanings? To this question, H. P. Grice, John Searle, and others who argue for mentalist theories of meaning have claimed that the capacity for the materiality of speech acts to relate to meaning is an extension of human intentionality: the biological capacity of conscious mental states to represent objects and states of affairs of the world.¹³ That is to say, the ability of utterances to represent meaning is not intrinsic to the materiality of the utterance itself, but rather derives from more fundamental functions of human intentionality. In virtue of this dependent relationship,

¹³ John Searle makes this connection explicit in *Intentionality: An Essay in the Philosophy of Mind*, (Cambridge: Cambridge University Press, 1983), 160-161. One of the earliest proponents of “mentalist” theories of meaning (the view that speaker meaning is distinct from sentence meaning, that semantic notions such as meaning are derivative of more fundamental psychological states such as beliefs and desires) is H. P. Grice. See: Grice, “Meaning,” *The Philosophical Review* 66/3 (1957): 377-88. For foundational texts on speech acts, see J. L. Austin, *How to Do Things with Words* (Cambridge, Mass.: Harvard University Press, 1962) and Searle, *Speech Acts* (Cambridge: Cambridge University Press, 1969).

Searle argues that the theory of speech acts ought to be understood as a branch of the philosophy of mind.¹⁴ Analogously, I argue in this dissertation that the capability of musical materiality to relate to and represent meaning derives from the more general human biological capacity of intentionality; that is, for mental states to represent objects and states of affairs. This is to say that questions of musical materiality and meaning are dependent on the logically *prior* questions of how humans relate to materiality generally. Any satisfactory account of how musical materiality relates to meaning will therefore require first an account of how human intentionality relates to materiality.

Example 0.1 illustrates the starting point of my approach. The two arrows depict the distinct ways in which human intentionality enables the materialities of both speech acts and music to take on representational capacities. Although the arrows may look the same, they are not intended to represent identical structures; the arrows imply different internal structurings of the enabling relation, owing to differences of context between ordinary language and music.¹⁵ Nevertheless, I will argue in **Chapter One** that there is enough overlap between the intentionalistic structures of these two practices that speech act theory can serve as a point of entry for our investigation into how musical materiality represents meaning.

In this study, I base my philosophical framework on a set of foundational notions regarding the philosophy of mind which I wish to make

¹⁴ Searle presents this view in several published writings, but in especially succinct terms in "Meaning, Mind and Reality," *Revue Internationale de Philosophie* 2/216 (2001): 173-79.

¹⁵ Nuances in terms of their respective similarities and differences will be discussed in greater detail in **Chapter One**.

explicit here. My study builds upon the tradition of biological naturalism, a late twentieth-century branch of the philosophy of mind that expressly rejects the prior traditions of dualism, behaviorism, materialism, and cognitivism, among others.¹⁶ Biological naturalism subscribes to a scientifically-oriented approach to the traditional mind-body problem. It makes three mutually dependent claims regarding the nature of mental states: 1. mental states are higher-level features of specific lower-level neurobiological processes; 2. mental states, despite their biological basis, are ontologically subjective—that is to say, they have a strictly subjective (first-person) ontology yet, critically, can be approached objectively; and 3. most, but not all, mental states are intentionalistic in that they are about or refer to objects and states of affairs.

The biological naturalist framework makes two further sets of ontological distinctions that are central to my study: 1. the distinction between intrinsic and derived agency, and 2. the distinction between observer-independent and observer-dependent phenomena. The distinction between intrinsic and derived agency has not always been maintained or made explicit in musicological writings on agency and is frequently blurred in Critical Organological writings.¹⁷ In the philosophical framework of biological naturalism, intrinsic agency is understood to be a higher-level feature

¹⁶ Searle presents his definition and framework for biological naturalism in several publications, most notably in: *Intentionality* (1983), *The Rediscovery of the Mind* (Cambridge, Mass., MIT Press, 1994), and *Mind: A Brief Introduction* (New York: Oxford University Press, 2004). For a well reasoned critique of biological naturalism, see Kevin J. Corcoran, “The Trouble with Searle’s Biological Naturalism,” *Erkenntnis* 55/3 (2001): 307-24.

¹⁷ For a close discussion and analysis of how the notion of agency has been deployed in musicological writings, see Seth Monahan, “Action and Agency Revisited,” *Journal of Music Theory* 57/2 (2013): 321-71. The blurring of these distinctions is exhibited in the Critical Organological writings cited above in footnote No. 2.

exclusive to biological organisms (both human and animal) that possess the necessary neurobiology for producing genuine mental states and intentionalistic representations. Intrinsic agency is therefore not reducible to other forms of materiality and hence not a feature of material “things” or man-made technologies, since the latter do not possess the necessary neurobiology to create such mental states.¹⁸

On the other hand, derived agency or “as-if” agency is a (second level) *representation* of intrinsic agency. Derived agency gains its representational capacities from the more fundamental biological resources of intrinsic agency. For instance, the capacity for a map to represent meanings beyond its immediate materiality derives from intentionalities that have been attributed to it by human agents who do possess intrinsic intentionality. It follows from this distinction that any perceived sense of agency in materiality is derivative of genuine biological agency, a notion that contrasts with the claims and practices of Critical Organology. The importance of this ontological distinction for understanding how musical materiality represents meaning is twofold. On the one hand, the distinction isolates biologically based agency as the fundamental resource for the ability of musical (as well as other) materialities to represent meaning, and hence establishes mental phenomena rather than materiality alone as the necessary site of investigation. And on the other hand, this ontological distinction helps focus the investigation on the genuine

¹⁸ In **Chapter One** I will provide a more detailed working definition of consciousness. In summary, I subscribe to the view that consciousness is a biological phenomenon of the natural world and that its functions are predicated on a specific set of neurobiological features. Though neurobiological entities are the only known entities that possess features of consciousness, it remains open that we might one day be able to produce or even find alternative processes that engender consciousness.

complexities, so far insufficiently studied, of how intrinsic agency enables derived agency in musical practices. A possible reason that these complexities have so far been inadequately studied in musicological scholarship is that the notion of agency has often been applied loosely to both biological agents and non-biological materiality. The blurring of this important distinction obscures the complex ways with which intrinsic agencies enable and structure derived agencies in materiality. To be sure, it is often useful to think metaphorically about agency.¹⁹ Yet problems and confusions arise when epistemologically based discussions of (metaphorical) agency blur into ontological claims, obscuring genuine complexities at work.²⁰

The second set of distinctions that follow from the biological naturalist framework concerns the distinction between observer-independent and observer-dependent phenomena. This distinction is relevant to the relation between musical materiality and meaning because it points toward a methodological framework grounded on logical, as opposed to phenomenological, analysis (whose differences will be explored in **Chapter One**). Broadly speaking, observer-independent phenomena are those that exist and function regardless of human attitudes. These are typically physical

¹⁹ In recent years there has been a wealth of interest regarding metaphors in musical discourses. Among this literature that relate to the central themes of this dissertation are writings that focus on metaphors that have their sources in the body and/or the physical environment. For a small selection of these writings, see: Marion Guck, "Analytical Fictions," *Music Theory Spectrum* 16/2 (1994): 217-30; Mark Johnson, "Embodied Musical Meaning," *Theory and Practice* 22/23 (1997/98): 95-102; Janna Saslaw, "Forces, Containers, and Paths: The Role of Body-Derived Image Schemas in the Conceptualization of Music," *Journal of Music Theory* 40/2 (1996): 217-43; Judy Lochhead, "The Metaphor of Musical Motion: Is there an Alternative," *Theory and Practice* 14/15 (1989/90): 83-103; George Fisher and Judy Lochhead, "Analyzing from the Body," *Theory and Practice* 27 (2002): 37-67; Arnie Cox, "Embodying Music: Principles of the Mimetic Hypothesis," *Music Theory Online* 17/2 (2011); Lawrence Zbikowski, *Conceptualizing Music: Cognitive Structure, Theory, and Analysis* (New York: Oxford University Press, 2002).

²⁰ See footnote No. 6.

and biological phenomena of the natural world (some familiar examples are mass, gravity, metabolism, etc.). Mental states, as biological features of organisms found in the natural world, therefore belong to this class of observer-independent phenomena. Observer-dependent phenomena, on the other hand, are humanly constructed notions (which can themselves become genuine realities) that exist only insofar as human beings believe them to exist. Some everyday examples of observer-dependent phenomena include: the meanings of spoken sentences, the concept of money, socio-cultural institutions, and of course musical meanings. As such, observer-dependent phenomena typically exhibit derived agency imposed on some form of materiality.

The relevant implications of this second set of distinctions are: 1. mental states, as a part of the natural world, are conditioned by the same physical laws that govern all of the natural world's other features; 2. as such, there are logical structures that underlie the ways our mental, intentionalistic capacities represent objects and states of affairs; and 3. by extension, such logical structures underlie the ways in which mental capacities mediate materiality and meaning. The implications are that mental states, despite their intrinsic first-person subjectivity, have logical features that can and should be approached objectively through logical, as opposed to phenomenological, analysis.²¹

My approach therefore contrasts with those of Critical Organology in two important respects. In terms of a basic ontology: I identify the functions of

²¹ I will discuss the merits and problems of phenomenological analysis (as contrasted with logical analysis) in **Chapter One**, section 1.5.

human agency, as opposed to materiality, as the focal point of mediation. I therefore set out to explore the complexities with which human intentionality, as a feature of consciousness and agency, mediates how materiality relates to meaning in musical practice. And in terms of how historical contingencies figure in the basic ontology of this relation: rather than claiming that the ontologies governing how materiality and meaning are instantiated change across historical periods and cultural spaces, I show (in the case studies of **Part II**) how varied historical manifestations of the relation between materiality and meaning exist coherently, and are in fact derivative of, the stable structures of human intentionality. My approach aims to reconcile historical contingency with certain universal realities of the natural world (such as human intentionality) on which those contingencies depend. I return to this point later.

On the basis of this framework, I develop in **Chapter One** a philosophical theory of musical intentionality that extends Searle's general theory of intentionality to the domain of musicking. It aims to describe the mental intentionalistic structures that animate relations between materiality and meaning specific to musical practice.²² I stop short of calling it a general theory because it is beyond the scope of this dissertation to study the intentionalistic structures of all the principal musical activities (performance, listening, composing, imagining, analyzing, etc.) even within a single musical tradition. Instead, mine is a theory of intentionality based on musical

²² The words "intentional" or "intentionalistic" are used here (and henceforth) as adjectives of the noun "intentionality." "Intentionality" is used with reference to its traditional philosophical meaning. The words "intention" and "to intend" in their ordinary senses constitute but one manifestation of the broader concept of intentionality.

performance. Despite leaving many other musical activities unexplored, I believe that the approach presented here can help lay the groundwork for the study of intentionalistic structures across a broad range of musical practices.

For heuristic purposes, I define my unit of analysis as a “meaningful musical utterance” and situate it within the norms of Western art music. This unit of analysis is defined as: an intentional human action on which the performing agent attaches musical meaning(s) beyond the action itself. In order to develop its more distinctive features, I begin by first establishing basic structural parallels between meaningful musical utterances and everyday examples of speech acts. In both cases, bodily gestures are syntactical objects of materiality to which conceptual meanings are attached—meanings that are beyond the immediate material features of the actions themselves. I argue in **Chapter One** that the basic intentionalistic structure of a meaningful musical utterance, like that of most familiar speech acts, involves two levels of intentionality: one that causes the musical action and another that represents the conceptual meaning attached onto that action.

On the basis of this two-part structure, **Chapter One** culminates in a formal theory of musical intentionality that theorizes a marked feature of how materiality relates to meaning in musical performance. The theory formalizes the intentionalistic structures that underlie moments when the physical “feeling” of what it is like to execute a musical utterance becomes intimately connected to the utterance’s associated network of meanings. It is argued that during such moments the intentional content of the (first-level) intentionality that causes the physical action becomes an integral part of the intentional

content of the (second-level) musical meaning(s) that are attached to that action. This characteristic feature in large part distinguishes musical performance from common species of speech acts (though it possibly characterizes other performing arts); it is noteworthy that the feature has not received systematic accounts despite its recognition by most performers.

Having outlined in **Chapter One** a philosophical framework for how musical materiality relates to meaning in the context of musical performance, my primary aim in **Chapter Two** is to derive an analytic methodology in order to explore that relation in actual musical contexts. What is required is a methodology capable of modeling multiple musical intentionalities and their interactions. Although all existing music-analytical methodologies model aspects of intentionality with varying degrees of explicitness (even Schenkerian theory, a tradition that has been charged with stating what are claimed to be “facts” about the “music itself,” but frequently reveals the intentionality of its claims with statements such as “I *hear* x as y”),²³ the transformational theories associated with David Lewin are among the most self-consciously and self-reflexively intentionalistic. Three features of transformational theory lend themselves to the exploration of musical intentionality: 1. the theory makes explicit references to musical activities such as listening, performing, ear-training, etc., and expressly aims to model the kinds of human processes and their interactions that occur during these activities—what Lewin calls musical experiences, perceptions, intuitions,

²³ Leo Treitler, for instance, adheres to the traditional view of Schenkerian analysis when he states: “When Schenker speaks about how the listener hears things, he really means to be saying how they *are*. His analyses concern the musical object.” See Treitler, “‘To Worship that Celestial Sound’: Motives for Analysis,” *The Journal of Musicology* 1 (1980): 153-70.

enactments, etc.; 2. these processes are called upon for their rich intentionalistic implications; and 3. the generalizing powers of mathematical group theory provide the necessary “translation,” frequently in the form of isomorphisms, for modeling the simultaneous interaction between different levels of intentionalities.

Despite these relevant features of transformational theory, I argue that Lewin’s framing of intentionality, at times implicit, contains problematic features that prevent it from being a ready-made framework for analyzing musical intentionality in the terms that I develop in this dissertation. First, Lewin’s loosely post-Husserlian phenomenological framing of the intentionalistic implications of his various theories contains logical inconsistencies from the perspective of a biological naturalist account of intentionality.²⁴ Second, these inconsistencies lead Lewin to posit questionable associations between certain musical intentionalities (“intuitions”) and the group-theoretic and other formalisms that are intended to model those intentionalities.²⁵

My approach to developing an analytic framework is first to critically re-examine the principal intentionalistic assumptions that underlie the formal concepts of Lewinian transformational theory. With his celebrated figure from

²⁴ Several recent published writings (each from a different intellectual tradition) have reflected on what I am describing as the intentionalistic underpinnings of Lewin’s theories. See in particular: Daniel Harrison, “Three Short Essays on Neo-Riemannian Theory,” in *The Oxford Handbook of Neo-Riemannian Theories*, eds. Edward Gollin and Alexander Rehding (New York: Oxford University Press, 2011): 548-77; Steven Rings, *Tonality and Transformation* (New York: Oxford University Press, 2011): 16-21, 24-29; Brian Kane, “Excavating Lewin’s ‘Phenomenology,’” *Music Theory Spectrum* 33/1 (2011): 27-36; Maryam Moshaver, “Telos and Temporality: Phenomenology and the Experience of Time in Lewin’s Study of Perception,” *Journal of the American Musicological Society* 65/1 (2012): 179-214.

²⁵ Lewin’s group-theoretic apparatuses can be understood in one sense to exemplify Lawrence Zbikowski’s notion of cross-domain mapping.

Generalized Musical Intervals and Transformations of 1987 (replicated here as **Example 0.2**), Lewin presents two contrasting classes of intentionalities that could be modeled by the abstract formal components of the figure. These are what he calls the Cartesian-intervallic attitude and the transformational attitude. Under the transformational attitude, the formerly static intervallic measurement of “*i*” is re-conceptualized with human “doings” that actively enact the “distance” between the musical objects. However, I argue that the transformational attitude models not so much the intrinsic intentionalities that animate real-world actions, as *senses* of actions; this is to say that Lewin’s transformational “actions” and “doings” are not genuine embodied actions in any real-world sense, but rather represent conceptual notions and values.²⁶ Conversely, the supposedly static intervallic attitude entails a greater degree of active intentionality on the part of the agent than Lewin acknowledges. Interval classes, to cite but one example of the intervallic attitude, are almost never purely representations of fixed observer-independent facts, but are representations of distinct conceptual notions imbued with cultural values.²⁷

The purpose of pursuing these (and other) reformulations in **Chapter Two** is to relativize Lewin’s original distinctions between the intervallic and

²⁶ My view corroborates with Rings’s assessment of the ontology of Lewin’s transformational attitude. Rings writes: “Yet, there are clearly many instances in the transformational theory literature (the majority, in fact) where such a literal, “real-world” interpretation of the transformational attitude does *not* work. The transformations in many analyses do not correspond in any obvious way to physical things some musical actant does out in the world to execute a passage.” See Rings, “Tonality and Transformation” (Ph.D. diss., Yale University, 2006): 49-50.

²⁷ For a fine illustration of this point regarding the intentionalistic contents of familiar (tonal) Generalized Interval Systems, see Rings’s analysis of the opening gesture of the Prelude from Bach’s Cello Suite in G major. See Rings, *Tonality and Transformation* (2011): 21-24.

the transformational attitudes.²⁸ But more significantly for the purposes of deriving a methodology for analyzing the structures of musical intentionality (to serve the analytic case studies of **Part II**), the re-formulations make available as-yet unexplored potentials for Lewin's theory to model real-world performative actions and the relations between those actions and their associated conceptual values.²⁹ The resulting analytic framework, illustrated by **Example 0.3**, is one that readapts Lewin's mathematical formalisms to model as-yet unexplored intentionalistic contexts and structures.

Part II consists of three analytic essays that illustrate the interpretive potentials afforded by the theoretical and methodological framework outlined in **Part I**. The essays aim to illuminate the creative ways in which composers draw on the intersecting relation between musical materiality and meaning as a creative resource. Although many of the musical details I discuss can be explored independently of the philosophical framework, I argue that the philosophical and methodological construction of **Part I** is important for interpretive application in two principal ways: 1. it spotlights a class of musical phenomena whose interactions by and large have not been

²⁸ It has been argued by Julian Hook, for instance, that the distinction Lewin draws between Generalized Interval Systems (GIS) and transformational systems is not clear-cut, that GIS and its transformational counterpart participate throughout Lewin's writings as essentially two sides of the same coin. See Julian Hook, "David Lewin and the Complexity of the Beautiful," *Intégral* 21 (2007): 173-75. My views concur with Hook's assessment and argue that this is especially so when one strips away the descriptive language for each system.

²⁹ In a recent publication, James Bungert has set out on a similar project. Citing from Bungert's abstract: "This article represents a unique interpretation of Lewin's *transformational attitude*: rather than elaborating mathematically grounded transformational analyses, this article pursues the performer's physical actions in order to heuristically reconstruct the compositional logic of the Corrente from J. S. Bach's Keyboard Partita in E minor...this article conceives Bach's compositional decisions in terms of a subtle physical performance challenge posed at the Corrente's outset." See James Bungert, "Bach and the Patterns of Transformation," *Music Theory Spectrum* 37/1 (2015): 98-119. Bungert's notions and analytic practice relate closely with my analysis of a Haydn string quartet movement in **Chapter Three**.

emphasized in the standard literature; 2. it forces a conscious awareness on the part of the analyst of the kinds of ontological assumptions that underlie his/her interpretative claims. One's assumptions about the nature of the mind or the philosophy of science, for instance, can directly shape one's interpretive claims and how one formulates analytic questions. The philosophical framework folds the critical reflection of those issues and assumptions into the analytic process itself.

In **Chapter Three** I explore a shared (isographic) "gestural" pattern that characterizes both the successions of up-bow / down-bow motions of the principal motive and the successions of large-scale structural upbeats and downbeats in the first movement of Haydn's String Quartet Op. 64, No. 3. I argue that the familiar claims of structural *upbeat* and *downbeat* status in tonal phenomena are not intrinsic to tonality, but are metaphoric, conceptual values derived from the intentional representations of physical motions. In the case of Op. 64, No. 3, I argue that the physical senses involved when performing the principal motive's bowing pattern, that is to say the phenomenal character of their intentionalistic representations, impart a set of locally defined meanings to the otherwise stock notions of structural rhythm. The progression of large-scale rhythmic and formal articulation therefore gains a distinctive set of senses derived from the specificity of the string players' physical gestures.

Chapter Four explores the conceptual notion of processual form³⁰ through the performance consideration of tempo in the first movement of

³⁰ I borrow this notion from the work of Janet Schmalfeldt on formal processuality. See Schmalfeldt, *In the Process of Becoming: Analytic and Philosophical Perspectives on Form in Early Nineteenth-Century Music* (New York: Oxford University Press, 2011).

Schubert's Piano Sonata, Op. 42 (D. 845). Although the notion of processuality in musical form holds visceral connotations of continuous action and its unfolding, I argue that such senses remain dormant in performances that maintain an unchanging tempo for the movement's two principal thematic materials. I suggest that the distinctive processuality of the movement's form derives in large part from the contrasting metric character of its thematic materials; when interpreted within the context of late eighteenth- and early nineteenth-century conventions of tempo and meter, the two principal thematic materials point to contrasting tempi in performance. The chapter closes with my own recorded performance that aims to capture the processuality of the movement's musical form through careful attention to the changing topography of its meter and tempo.

In **Chapter Five** I begin by reflecting on a famously puzzling gesture near the end of Chopin's Prelude in E-minor from Op. 28: a pause preceded by a dissonant chord with an implied but unrealized resolution. I define this moment as a "negative" gesture, one characterized by what the performer intentionally does *not* act out. In order to pursue how this singular but marked gesture (viewed as an instance of musical materiality) might relate to a larger network of conceptual meanings, I explore a complex web of associations—both embodied and conceptual—between the E-minor and A-minor preludes, associations I infer from a surviving sketch leaf containing the working-out of both preludes. In the process, I offer alternative ways for thinking about the question of cyclic integration with regards to Chopin's Op. 28 cycle.

On one level, this dissertation is about furthering an understanding of the connection between materiality and meaning, between performance and analysis. However, my approach also aims to make a deeper philosophical argument: music, as a product of human thoughts and historical contingencies, coexists coherently with, and is in fact dependent upon, universal and objective realities, realities represented by such foundational scientific theories as evolutionary biology, atomic physics and others. The vast body of objective scientific knowledge we now possess has made it possible to begin to ask as-yet unexplored questions about how the freedom and diversity of a human activity such as music can not only exist coherently with universal features of physical reality, but also be dependent upon such basic fixed realities. How do we reconcile seeing music as the product of unbound human thoughts and feelings with the astounding fact that music exists consistently within exactly one world, one that is bound by a set of hard, objective, and universal facts? How do the contingencies of music (across historical eras, cultures, geographies, etc.) fit within the constancy of such a reality, as part of a coherent worldview?

I believe these are pressing questions if we wish to achieve a better understanding of the deeper “rationalities” behind music’s many fluid phenomena—such as taste, judgment, and representations—across its many historical and cultural manifestations.³¹ Since these have not yet become

³¹ At present, I tentatively envision such a project as being in some ways analogous to what John Rawls, for instance, has argued in the twentieth-century for the notion of justice. See: John Rawls, *A Theory of Justice* (Cambridge, Mass.: Harvard University Press, 1971). Such a project might begin by comparing the “fluid” phenomena of musical discourse with the rational structures of likewise fluid non-musical discourses such as justice and moral judgment.

mainstream questions of musical scholarship today, which either studies music's contingent characteristics in isolation from their naturalistic ties or argues against the universality of those ties, my approach to questions of materiality and meaning can be seen as an attempt to contribute to this larger puzzle.³² The formulation of these broader questions has been made possible by fields such as Critical Organology that have begun to explore how music has historically interacted with its physical realities (instruments, technologies, human bodies, etc.). However, I wish to argue that the historically- and epistemologically- oriented frameworks of Critical Organology—much of it inspired by the work of postmodernist thinkers such as Foucault, Latour, Kittler, and post-Husserlian phenomenologists such as Heidegger and Merleau-Ponty—have so far blocked access to the broader *ontological* questions of how music fits coherently into a material world that operates within a finite set of governing laws, even if these laws continue to be subjected to revision by scientific research. One reason, I suggest, is that postmodernist frameworks, with their emphases on historical and cultural contingency, are well-suited to examine human realities on their own terms, but ill-suited to accommodate them within universal and objective realities of which all human constructed domains are a coherent part. As I have already suggested, logical difficulties emerge in Critical Organological writings when

³² One possible reason for the separation between the humanities and the natural sciences might stem from the fact that the birth of musicology as a formal discipline came after what Rens Bod in *A New History of the Humanities* (Oxford: Oxford University Press, 2014) has recently argued was the historical bifurcation at the beginning of the eighteenth-century between what we now recognize as the humanities and the natural sciences. As a result, in our modern conception products of human thoughts, feelings, and actions such as music, art, and literature, are categorically separate from natural and universal phenomena, the domain of the so-called “hard” sciences.

postmodernist frameworks are taken beyond their traditional historical purviews, to making ontological claims about how humans interact with materiality in a real-world context. My broader aim in this dissertation is to bring the material and technological turn in current musicology to the next logical stage by offering an alternative philosophical framework that assimilates the contingency of human realities with the universality of physical realities. My aim is not to undermine music's historical and other contingencies and replace them with deterministic explanations. Rather, it is to understand how freedom and diversity within a single domain of human reality such as music can be created out of universal facts of reality, and to explore the extraordinary complexities of that coherent existence.

Towards that aim, I suggest that the biological feature of intentionality found in humans and animals (as expressed by a biological-naturalist notion of the mind) constitutes the quintessential enabling mechanism and the focal point for exploring that coherence. As a real and irreducible phenomenon caused by (neuro)biological activity found throughout the natural world, intentionality is the indispensable junction by way of which human constructed domains (such as music and culture) exist and relate coherently with the physical world. By theorizing the intentionalistic structures of a localized aspect of music, I aim to contribute a small piece to a large puzzle.

CHAPTER ONE

A THEORY OF MUSICAL INTENTIONALITY

1.1 Introduction: Two Levels of Musical Experience

Consider the dollar bill: experienced purely as a material object, it is a piece of paper made with a special cotton blend rendered with green ink patterns. Most readers will have had first-hand experiences with its distinctive texture, smell, size, thickness, weight, and strength. Owing to these material properties, the dollar bill as a “material tool” can in fact be used to fulfill a diverse array of practical functions. The fortepianist Malcolm Bilson once demonstrated that the U.S. dollar bill is ideally suited to fill the inside of a loose tuning pin on the pinblock of a Viennese fortepiano! Of course, paper money is not ordinarily experienced or used in terms of any of its material affordances, of which there could be many. Rather it is most commonly used as legal tender which stands for concepts and values that exceed its “ready-at-hand” material capabilities.

The above describes two modes with which we encounter the dollar bill: on the one hand we have embodied sensory experiences with the paper in the “here-and-now” as a concrete piece of material, and at the same time we use the paper to stand for conceptual values, promises, and legal obligations that extend beyond its immediate physical characteristics. This brief illustration aims to capture a foundational feature that underlies musical practice, a feature that I intend to formalize with the theory of musical

intentionality. I argue that we likewise engage with musical utterances on two levels. On one level, we have immediate sensory experiences with the purely material aspects of a musical utterance. As a listener, for instance, we encounter the materiality of musical utterances most commonly in the forms of aural and visual experiences. In the case of the performer, these perceptual experiences combine with experiences of one's own physical actions acting upon instruments, spaces, and so on. Yet on another level, we listen to and perform musical utterances beyond our immediate experiences of their sheer sonic and physical manifestations. When we listen to and perform musical actions, we attach conceptual meanings and expressive associations over and above how we experience their physical attributes.

Conceptualizing the distinction between these two levels of experience is more difficult in the case of musical utterances than in the case of language (and the case of the dollar bill), owing to a more intimate relation between how we experience music's materiality and its expressive associations. Differences in this regard between music and language are analogous to the kinds of distinctions Christopher Small describes between what he calls verbal and gestural language. Small writes:

This brings us to another difference between verbal and gestural language: the fact that while in the former the relation between the sound of a word and its meaning is arbitrary (apart from occasional onomatopoeia), in the latter it is not—or at any rate, not completely. There is no special reason, for example, other than that of historical development from a common origin, why the words *eau*, *agua*, *aigua*, and *aqua* on the one hand and *water* and *Wasser* on the other should all be used to denote the liquid

element; any other combinations of vocal sounds would have served as well and do so in other languages that are not historically related to Latin or German models.

But the relation between the shape or pattern of a gesture and its meaning is not arbitrary. Many gestures are fully iconic and carry within themselves the picture of their meaning: the baring of teeth, for example, to signify aggression has an obvious basis in the attack and defense ways of animals...and the holding out of the empty right hand to show we are not carrying a weapon. This means not only that when we use this kind of communication we are using one set of relationships, one pattern, to signify another...but also that gesture and meaning are, at least to some degree, analogues one of the other.

To some degree only, however. There is an element of arbitrariness, or at least of choice between alternative representations, in gestural language also. If there were not, if all gestures were exact analogues of the relationship they articulate, those gestures would all be identical for all members of the same species; every gesture would have its significance, and that would be that. Nor would any change or development be possible.³³

This is to say that, unlike the dollar bill (and analogously for the linguistic examples cited by Small), where there is no obvious relation between how we experience it as a physical materiality (as pieces of paper or sounds produced) and the conceptual values we impose on it,³⁴ I argue that it

³³ Christopher Small, *Musicking: The Meanings of Performance and Listening* (Middletown, CT.: Wesleyan University Press, 1998), 59-60.

³⁴ On the flexible relation between symbols and their intended meanings, the anthropologist Leslie White (writing during an earlier era) argues: "The meaning, or value, of a symbol is in no instance derived from or determined by properties intrinsic in its physical form: the color appropriate to mourning maybe yellow, green, or any other color; purple need not be the color of royalty; among the Manchu rulers of China it was yellow. The meaning of the word 'see' is not

is a marked feature of musicking across disparate histories and genres that there often exists a palpable relation between how we experience the materialities of music and the kinds of expressive meanings we impose on those materialities. Yet, similarly to what Small argues with regard to “gestural language,” such relations in music are not fixed “one-to-one” mappings. I likewise argue that there is an elasticity across a wide continuum in how musical materiality, by way of our experiences of it, relates to musical meaning. There is a continuum that ranges from a close correlation between “what it is like” to perform an utterance and its associated meanings, to a non-congruence on the other extreme.

The purpose of this chapter is to formalize a philosophical framework that defines what makes these relations possible and how they are made possible. The chapter aims to define the logical structures that underlie the flexibility of these relations. Growing out of such a framework, a methodological space can then be delineated, one that will facilitate the creative exploration of this elasticity between musical materiality and meaning. In what follows, I will argue that mental representation-based theories of meaning derived from the philosophy of language and mind—theories that distinguish speaker meaning from sentence meaning, theories that argue that speaker meaning is to be analyzed in terms of speaker

intrinsic in its phonetic (or pictorial) properties... The meanings of symbols are derived from and determined by the organisms who use them; meaning is bestowed by human organisms upon physical forms which thereupon become symbols.” See: Leslie White, “The Symbol, the Origins of Human Behavior,” *Philosophy of Science* 7/4 (1940): 453.

intentions³⁵—constitute a logical starting point for pursuing such a philosophical framework. I will argue that these theories and their analytic apparatus can help define ontological categories in musical discourse—categories such as meaning, non-meaning, action, perception, conscious, non-conscious, materiality, agency—whose distinctions are necessary for subsequently understanding how musical materiality relates to meaning.

1.2 Musical Utterances, Speech Acts, and the Enabling Functions of Intentionality

When laying out his wishes for his theory of embodied meaning, Mark Johnson writes:

I seek to recover most of the resources for meaning-making that are ignored in the writings of influential philosophers such as Quine, Searle, Davidson, Fodor, Rorty, and many others. In addition to the standard notion that meaning involves the conscious entertaining of concepts and propositions, I am focusing on mostly *nonconscious* aspects of a person's ability to meaningfully engage their past, present, and future environments. I am proposing what I call the embodied theory of meaning.³⁶ (my emphasis)

According to Johnson, the cited philosophers partake in what he calls the “conceptual-propositional theory of meaning,” which explores meaning

³⁵ See **Introduction**, footnote No. 13.

³⁶ Mark Johnson, *The Meaning of the Body: Aesthetics of Human Understanding* (Chicago: University of Chicago Press, 2007), 9-10.

only in terms of conscious propositional thought in the form of subject-predicate structures. Without rejecting the presence of propositional thinking, Johnson argues that “propositions are *not* the basic units of human meaning and thought.” Rather, “meaning traffics in patterns, images, qualities, feelings, and eventually concepts and propositions.”³⁷ As Johnson makes clear, he believes that these embodied sources for meaning impart no conscious imprint, which is to say no mental representational content. This manner of construing meaning’s relation with the human body echoes the post-Husserlian phenomenological projects of Heidegger and Merleau-Ponty that frame human ontologies as so-called “always-already-involved-in-the-world.”³⁸

Such related notions raise the questions: if indeed those bodily experiences that are pertinent to constructions of meaning harbor no mental representational content, what are the pathways through which they are able to “link up with,” and in turn influence, conceptual meanings which are acknowledged to be primarily of a mental nature? If indeed physical phenomena (including bodily actions) are nonconscious and non-representational, how might they in turn shape conscious representational content?³⁹ In response to Johnson, I argue that evidence suggests that the kinds

³⁷ Ibid., 9.

³⁸ Ibid., 264. For an explicit connection of these views with post-Husserlian phenomenological projects, see Hubert Dreyfus, “Phenomenological Description Versus Rational Reconstruction,” *Revue Internationale de Philosophie* 217 (2001): 181.

³⁹ Though it is beyond the scope of this chapter to survey more comprehensively the different theoretical discourses that share a non-representational view of meaning, I would like to mention ecological approaches to action, perception, and meaning expounded most notably by James J. Gibson in his theory of affordances. As a standard text, see James J. Gibson, *The Ecological Approach To Visual Perception*, (New York: Psychology Press, 1986)). Eric Clarke has more recently adapted Gibsonian ecological approaches to the domain of musical meaning. See: Eric

of embodied resources that contribute to meaning in musicking are in fact supported by mental representations. Moreover, I argue that it is the active capacities of the mental that generate (and house) the resources that enable musical materiality and meaning to intersect. Rather than directing the enquiry onto bodily or material / technological sites, I propose to (re)direct the focus onto the active features of consciousness that are responsible for engendering and shaping such relations.

In order to identify the precise mental capacities that engender such relations, I draw first from existing (and more extensive) understandings of similar processes in a comparable human activity to that of music: language. On the overlapping relation between music and language in human evolution, Gary Tomlinson has written recently that:

The set of capacities that enables musicking is a principal marker of modern humanity...Most of these capacities overlap with nonmusical ones...In the area of overlap, linguistic capacities seem to be particularly important, and humans are (in principle) language-makers in addition to music-makers – speaking creatures as well as musicking ones.⁴⁰

Clarke, *Ways of Listening: An Ecological Approach to the Perception of Musical Meaning* (Oxford: Oxford University Press, 2005) and Clarke, “Music Perception and Musical Consciousness,” in *Music and Consciousness: Philosophical, Psychological, and Cultural Perspectives*, eds. David Clarke and Eric Clarke (Oxford: Oxford University Press, 2011). Clarke (and Clarke) notably reject the presence and active functions of mental representations. Notwithstanding differences in their goals and formulations, my comments regarding Johnson’s views apply equally to Clarke (and Clarke)’s principal assertions.

⁴⁰ Gary Tomlinson, *A Million Years of Music: The Emergence of Human Modernity* (New York: Zone Books, 2015), 23-24.

Following upon the work of Frege and Russell, John Searle has argued that the capacity for language to refer and denote beyond its immediate physical manifestations (whether as sounds, gestures, or marks) derives from the more fundamental mental capacity to refer or be about objects and states of affairs in the world. Searle argues that this capacity, recognized in philosophical contexts as the capacity for intentionality, functions according to a complex set of logical structures owing to its basis in biology and, more specifically, to its basis in consciousness as a feature of neurobiology. Such logical structures govern the ways in which we relate to the physical world around us, as well as in the case of humans how physical objects (including bodily actions) take on meanings, status functions, institutional values etc. that are beyond the physical manifestations themselves—the latter arguably a unique human characteristic.⁴¹ If indeed, as Tomlinson suggests, human linguistic capacities overlap in important ways with those of music, the structural components of a meaningful musical utterance (the proposed basic unit of our analysis) can be understood to parallel in important ways those of a speech act in ordinary language.

Notwithstanding differences (of the kind Small describes between verbal and gestural language) that reside at later levels, at the most basic level the actions of musical utterances, like the actions of speech acts (whether manifested as sounds or gestures), likewise carry conceptual meanings,

⁴¹ For a short survey of arguments that exist both for and against the Neanderthals' alleged capacity for symbolism and representation, see: Steven Mithen, "Creations of Pre-Modern Human Minds: Stone Tool Manufacture and Use by Homo Habilis, Heidelbergensis and Neanderthalensis," in *Creations of the Mind: Theories of Artifacts and Their Representation*, eds. Eric Margolis and Stephen Laurence (Oxford: Oxford University Press, 2007), 289-311.

though of a far less specific kind. No matter how closely a bodily action might seem intrinsically related to its projected meanings, the essential feature shared by both speech acts and musical utterances, I argue, is that conceptual meanings are imposed upon bodily actions, where such actions are considered in one way as objects of materiality in the world like any other objects.

John Searle's general theory of intentionality, which follows upon his earlier research in the philosophy of language, serves to lay out the philosophical foundations for his earlier theory of speech acts.⁴² Searle's general theory of intentionality makes explicit that human speech act behavior parallels and derives from the more fundamental structures of human intentionality.⁴³ In light of the parallelisms between musical utterances and speech acts, my theory of musical intentionality therefore builds upon the general theory of intentionality outlined by Searle. It aims to make explicit how the shared faculties of intentionality enable in similar yet different ways the structural features of musical utterances. The sections that follow will formalize the core components of the theory, namely:

1. How the logical properties of human intentionality structure musical actions and perceptions, and
2. How such actions and perceptions in turn, via the logical properties of human intentionality, shape conceptual meanings that are attached onto those musical actions and perceptions.

⁴² Searle, *Intentionality* (1983); *Speech Acts* (1969).

⁴³ See also **Introduction** footnote No. 14.

1.3 The Basic Structural Components of Intentionality

To begin, I rehearse some of the basic structures of intentionality presented in Searle's general theory in *Intentionality* (1983).⁴⁴ We recall that intentionality denotes those aspects of conscious mental states that are directed at, are about, or represent states of affairs beyond themselves. In this definition, any conscious mental state that has directedness—or “aboutness”—to something beyond itself might be called an intentionalistic state. Commonly cited examples of intentionalistic states are beliefs, desires, intentions, hopes. As Searle points out, these mental states have a two-part structure: a propositional content (*that* such-and-such) represented under a psychological mode (such as belief, desire, or in the case of actions, an intention to carry out something). In the analytic philosophical tradition, this structure is represented more simply as: **S(*p*)**, where **S** denotes psychological mode and *p* the propositional content. To illustrate, below are two examples of intentionality, each with its psychological mode and propositional content:

Believe (*that Obama is president*).

Hope (*that Obama is president*).

The above examples illustrate that the same propositional content can occur under different psychological modes, while conversely the same

⁴⁴ The English term “intentionality” is derived from the German term *Intentionalität*, and its use here has no specific association with the conventional meaning of “intending,” as in the separate German term *Absicht*. To intend to do something is merely one of many possible types of intentionality.

psychological mode can accommodate a potentially infinite number of propositions. It is important to note here that the proposition constitutes the content of the intentionalistic state and not the intentionalistic object of either the belief or hope. The object here is Obama, but the proposition is “*that* he is president.”⁴⁵

A core component of Searle’s theory of intentionality is that intentionalistic states and propositional contents further operate under two additional principles: 1. conditions of satisfaction and 2. direction of fit. In terms of conditions of satisfaction, a defining characteristic of propositional contents is that, when represented by a given intentionalistic state, they can be either true or false, fulfilled or unfulfilled: framed more generally, they can be said to be either satisfied or unsatisfied. Propositional contents determine a set of conditions under which an intentionalistic state can be satisfied (or not). The psychological mode of the intentional state, on the other hand, specifies the “direction” of how those conditions are satisfied in terms of the agent’s relation to the world. According to Searle, all intentionalistic states with a direction of fit thus internally represent some condition(s) under which that state will be satisfied or not satisfied in a given direction of fit between the agent the external world. For instance, if one has an intentionalistic state of belief (**S**) that such and such (*p*), the state of believing is satisfied (ordinarily in the case of beliefs one would say simply that it is true) if and only if some external reality in the world comes to match the conditions of satisfaction

⁴⁵ Lest there were confusions about this point, it is important to note also that propositional contents (though presented here in verbal terms) do not have to be either verbal or linguistic. In fact, most intentionalistic states that occur in everyday activities could have non-verbal/linguistic propositional contents.

determined by the propositional content under mental representation. In this sense, “belief” is said to have a “mind-to-world” ($m-w$) direction of fit.

Conversely, a desire or an intention to do something has a “world-to-mind” ($w-m$) direction of fit: the satisfactory fulfillment of these intentionalistic states is in these cases dependent on whether states of affairs external to the agent come to match the conditions set out by the desire or intention. Critically, in both sets of cases, human intentionality sets its own conditions that determine senses of success or failure. This last point makes clear the principal problem that comes with shifting the sites of interpretation beyond human intentions onto material media: material media cannot determine conditions for success or failure since they lack the necessary (neuro)biological capacities to do so.

Table 1.1 juxtaposes and summarizes the two broad categories of intentionality—cognitive and volitional—with each defined by their contrasting directions of fit.⁴⁶ The table additionally distinguishes between whether an intentionalistic state is causally self-referential or not and if so, its direction of causation.⁴⁷ This distinction, as we shall see later on, is a critical criterion by which musical utterances derive meaning from embodied and material domains.

⁴⁶ This table is a simplified version adapted from Searle, *Mind: A Brief Introduction*, 120.

⁴⁷ Causal self-referentiality characterizes the indexical intentionalistic representations of real-world actions and perceptions (i.e. in the “here-and-now”). These contrast with beliefs and desires which are non-causally self-referential and are conceptual in nature.

1.4 The First Level: How Intentionality Structures Musical Actions and Perceptions

Earlier I suggested (in 1.1) that the actions and perceptions involved in musicking (chiefly performance and listening) impart various kinds of bodily experiences to both performers and listeners, and that in certain musical contexts these experiences relate to a network of conceptual meanings. In this section I aim to offer a framework that defines how the faculty of intentionality structures musical actions and perceptions at the first, immediate level of experience. To begin, I offer a framework that helps to distinguish between those actions and perceptions which are fully intentional, that is to say those which have mental representational content, from those which may not be fully intentional.

What does it mean for an agent to act and perceive intentionally in the context of music? In the senses with which I am using the terms here, actions and perceptions do not function independently of their conscious agents. On the nature of what can be properly be called actions, the philosopher of action Rowland Stout writes:

An action is an agent doing something, and as such essentially involves the agent. Understanding action is understanding what it is for an agent to act. The question of what it is to be a full-blown agent needs to be answered in tandem with the question of what it is for someone to act in a full-blown way. And this is usually taken to be the same as asking what it is for someone to act *intentionally*. Characterizing intentional

action and distinguishing it from lesser sorts of action or activity are the central goals of the philosophy of action.⁴⁸ [emphasis original]

For Rowland, the notion of action (and I suggest that the same holds true for the notion of perception) is intimately connected with notions of intentionality and agency. In terms of action, there are of course events occurring within our bodies which are not part of our acting intentionally: stomachs digesting, pupils dilating, or hair growing. These types of bodily phenomena, though active, are not normally considered actions because we can no more intend to secrete more acid to digest a meal than intend to grow more or less hair. These phenomena occur naturally as part of our natural biology, and because we cannot intend for them to happen one way or another, there is no intentionality that supports them—which is to say such “actions” hold no determinants for conditions of success or failure. To be sure, we might legitimately believe that if one’s hair were to stop growing, or if one’s digestive system malfunctions, that these events represent failures of a sort. But such failures are not intrinsic to the said biological phenomena; rather, in such “failed” cases our intentionality attributes them with notions of failure relative to what we believe conceptually counts as failures (or successes). In this way, the notion of “growth,” for instance, implies the presence of an intentionalistic state replete with conditions of satisfaction that render instances of hair growth either successful or unsuccessful. Yet insofar as hair itself is concerned, since it is not intrinsically intentionalistic (that is, hair is not considered to harbor mental representational content), the notion of

⁴⁸ Rowland Stout, *Action* (Montreal: McGill University Press, 2005), 3.

“growth” as applied to the biology of hair growth is purely “as-if” and metaphoric.

The above examples evoke clear-cut cases. Yet the distinction between intentional and non-intentional actions is not always so clear-cut either in everyday life or in more specialized cases of “skill-coping,” of which musical performance is a paradigmatic example. To understand how action and perception might relate to conceptual meaning in musical contexts, we need critical tools that sharpen our sensitivity in distinguishing between those that are intentional and those that are non-intentional, that is to say between those that harbor intentionalistic content and those that do not.

1.5 Phenomenological versus Logical Analysis

If, as I have argued, intentionality is the principal enabling pathway through which embodiment and materiality relate to conceptual meaning, locating the analytic tools for distinguishing between those actions that are intentional and those that are non-intentional constitutes a critical step in formulating a theory of musical intentionality and in approaching the central theme of this dissertation. In contemporary philosophy, there have been two dominant and contrasting approaches to these issues. The first might be broadly termed the phenomenological tradition (more precisely post-Husserlian or existential phenomenology); the second, the logical-analytic. In a series of well-known essays, Hubert Dreyfus and John Searle, each representing the two traditions respectively, offer contrasting accounts of

human actions and perceptions particularly in the areas of skill-coping, habits, and “know-how.” From the phenomenological perspective, Dreyfus argues that much of what we call skill-coping operates on the level of the background: a non-propositional, non-representational, and non-intentional field of forces that Heidegger and Merleau-Ponty call the “phenomenon of world.”⁴⁹ Subscribing to their views, Dreyfus writes:

Existential phenomenologists hold that the two most basic forms of intelligent behavior, learning and skillful action, can be described and explained without recourse to mind or brain representations.⁵⁰

While Searle also speaks of the background as a set of non-representational mental capacities necessary for intentionalities such as action and perception (among others) to properly function,⁵¹ he argues that the kinds of skillful actions that Dreyfus relegates to the non-representational background are in fact fully intentionalistic and analyzable in terms of their conditions of satisfaction.⁵² The differences in views between these two

⁴⁹ Hubert Dreyfus, “Introductory Essay: The Mystery of the Background *qua* Background,” in *Knowing Without Thinking: Mind, Action, Cognition, and the Phenomenon of the Background* ed. Zdravko Radman (London: Palgrave MacMillan, 2012), 9.

⁵⁰ Dreyfus, “A Phenomenology of Skill Acquisition as the Basis for a Merleau-Pontian Non-Representationalist Cognitive Science,” from <http://socrates.berkeley.edu/~hdreyfus/pdf/MerleauPontySkillCogSci.pdf> (2004): 1.

⁵¹ Searle, *Intentionality*, 141-159 and 141 in particular. See also: Michael Schmitz, “The Background as Intentional, Conscious, and Nonconceptual” in *Knowing Without Thinking*, 57. Schmitz takes Searle’s arguments further than Searle’s own original formulation.

⁵² For an extensive debate on this issue, see the following: Searle, “The Phenomenological Illusion,” in Searle, *Philosophy in a New Century* (Cambridge: Cambridge University Press, 2008), 107-136; Searle, “The Limits of Phenomenology,” in *Heidegger, Coping, and Cognitive Science: Essays in Honor of Hubert L. Dreyfus Volume 2*, eds. Mark A. Wrathall and J. E. Malpas (Cambridge, Mass.: MIT Press, 2000); Dreyfus, “Heidegger’s Critique of the Husserl/Searle Account of Intentionality” *Social Research* 60/1 (1993): 17-38; Dreyfus, “Phenomenological Description Versus Rational Reconstruction” *Revue Internationale de Philosophie* 55/216 (2001): 181-196;

dominant traditions derive in part from differences in their methods of analysis: phenomenological introspection of the phenomenologically available (and unavailable) on the one hand; and on the other, logical analysis of conditions, in our case the conditions of satisfaction for a given musical action or perception. In Searle's logical account, a crucial problem of the phenomenological methodology is that many if not most conditions of satisfaction under representation are not always phenomenologically available to the immediate conscious foreground. As Searle argues: "some of the most important logical features of intentionality are beyond the reach of phenomenology because they have no immediate phenomenological reality."⁵³

I now turn to discussing a musical example in order to illuminate how the methods of logical analysis—which entails the analysis of conditions and the intentional state(s) in question—might provide insights in distinguishing between those actions that harbor mental content and those that might not legitimately qualify as intentional actions. To cite but one recent example that argues for the non-representational status of musical actions, Roger Moseley writes:

The pedagogical materials and traditions of *partimenti*, which for so long eluded the attention of Anglophone scholars on account of their lack of a literary rubric, also operated according to serial and parallel logic: rather than a text to be read, a *partimento* is both a puzzle and an algorithm, a concise script that must be

Dreyfus "The Primacy of Phenomenology Over Logical Analysis," *Philosophical Topics* 27/2 (1999): 3-24. For a third-party perspective on these debates, see Sean Kelly, "Closing the Gap: Phenomenology and Logical Analysis," *Harvard Review of Philosophy* 13/2 (2005): 4-24.

⁵³ Searle, "The Phenomenological Illusion," 114-15.

uncompressed and processed via the hardware of a harpsichord, the interface of its keyboard, and the “wetware” of its player’s experience, skill, memory, and associations in order to become music. Such computation *need not be carried out consciously*; as Leibniz put it, “music is a hidden arithmetic exercise of the soul, which does not know it is counting.” This helps explain the phenomenon noted by John Locke, Étienne Bonnot de Condillac, and Denis Diderot in which the *cognitive burden of playing*—or, in the latter’s case, improvising—at the keyboard *is delegated from the brain to the digits*, thus affording the Gadamerian sensation of *being played even while playing*.⁵⁴ [my emphases]

Describing the practice of realizing *partimenti* (and figured bass more broadly), Moseley begins by acknowledging the presence and function of mental processes that are innate to the activity. Yet during the course of his description, Moseley adopts terms that evoke (even if they do not fully commit to) functionalist and computational theories of the mind. Although he cites the resources of memory, skills, and experience—all of which are traditionally acknowledged to be highly intentionalistic—as the bedrock that enable the necessary mental processing, Moseley conjures a computational, mechanistic view of the mind that leads him to conclude that such “mental” processes in fact need not be conscious. Since these processes harbor no mental representational content, the “cognitive burden” responsible for animating the musical activity can thus be understood as being “delegated from the brain to the digits.” In support of his views, Moseley evokes the plausible phenomenological sensation of seemingly “being played” by the material object of the keyboard “even while playing.”

⁵⁴ Moseley, “Digital Analogies,” 181.

Moseley's analysis echoes those of post-Husserlian phenomenology whereby high-level skill coping are explained in non-representational terms.⁵⁵ Yet he fails to recognize the multitude of conditions of satisfaction that are built into an activity as layered and acculturated as *partimento* realization that render it fully intentionalistic. Not least, the pedagogical origin of the *partimento* tradition, which aims to incrementally develop musical skills and judgment in its subjects, is precisely predicated on the conscious learning of these skills at the initial stages leading to the sedimentation of their conditions of satisfaction at deeper levels of intentionality in the later stages of mastery. The myriad conditions of satisfaction underlying *partimento* realization—as norms of voice leading, schemata, and other more nuanced features of style that do not amount to easy textual codification—do not typically manifest themselves at the phenomenological surface at later stages of learning to be sure, especially when considered from a real-time context. However, for *partimento* realization to function at all as a two-way communicative art form, one that lends itself to critical evaluation (in a master-student context), shared conditions of satisfaction figure as the basis for enabling such processes of evaluation. It is not that phenomenological introspections contradict the findings of logical analysis, but that they can only serve as the beginning rather than the end point for any such analysis: logical analysis of conditions takes over where phenomenological introspection ends.

The methods of logical analysis seek to establish whether there are *conditions of success and failure* that determine and regulate a given human

⁵⁵ Moseley cites the writings and ideas of Heidegger elsewhere in "Digital Analogies."

activity, and if so, seek to explore and identify those conditions. By doing so, the analytic method brings to the conscious foreground conditions of satisfaction that otherwise remain beyond the reach of phenomenological reflection. When approached this way, logical methodologies have the effect of “slowing down” real-time processes, revealing the multitude of conditions of satisfaction at work throughout the cognitive structure, many of which might indeed not be phenomenologically available but can be in principle made explicit (one could argue that this is precisely the function of texts and manuals that codify such kinds of historical practices). Analysis of conditions lifts the more embedded mental representations into foreground conscious awareness in the same way that when glitches occur during an activity of skill-coping, that such moments likewise bring those conditions (if only momentarily) to the fore of the agent’s consciousness. Moseley’s account neutralizes the active intentionalistic processes that underlie an activity that can be evaluated through constructed values in the guise of conditions of satisfaction, while gesturing toward non-representational materiality as at least in part “actively” responsible for engendering such conditions, conditions that have their basis in neurobiology.

Although the merits and practices of these contrasting methodologies remain debated, my purpose here is to introduce the methods and questions posed by logical analysis as a supplement to phenomenological introspection, the latter more frequently practiced in musicological studies of musical

action.⁵⁶ The aim is to introduce tools that sharpen our sensitivity to the often difficult distinction between musical actions that are intentional versus those that are non-intentional. In this section, I hope to have made the case that the essential property which distinguishes the intentional from the non-intentional is that we can delineate conditions of success/failure for the former and not for the latter. Moreover in the case of intentional musical actions, these conditions can in principle be brought to consciousness even in those cases when they do not have obvious phenomenological presence.⁵⁷

1.6 The Second Level: Intentionalistic Structures of Meaningful Musical Utterances

Having introduced the principal components of intentionality—such as psychological/intentional state, propositional content, condition of satisfaction, and direction of fit—and shown how this set of concepts animates and structures intentional musical actions and perceptions at the first level of experience, I explore in this section how conceptual meanings (at the second level of experience) are imposed onto first level actions and perceptions to

⁵⁶ To cite but one recent musicological study that explicitly draws upon the ideas of post-Husserlian phenomenologists, see: Jonathan De Souza, *Musical Instruments, Bodies, and Cognition* (Ph.D. diss., University of Chicago, 2013).

⁵⁷ On the question of whether there might be “non-intentional musical actions,” the question prompts two further distinctions. One can easily conceive of *non-musical* intentional actions: for instance the act of sitting on a piano bench would be an example of an intentional action that, though requisite for the musical purpose of playing the piano, is not typically understood to be strictly musical. One can also conceive of *non-intentional* actions that occur during otherwise intentional musical actions: the complex and intricate movements of the larynx during the intentional act of singing, for instance, typically do not harbor representational content for vocalists, who are traditionally trained through the aid of metaphors that represent their vocal technique in ways that are made mentally accessible.

give rise to a meaningful musical utterance. The chapter will then culminate with the formulation of a theory of musical intentionality that formalizes the intentionalistic structures underlying such an utterance.

To begin exploring how conceptual meanings are imposed onto experiences of musical materiality, I draw on a set of structural overlaps with the intentionalistic structures of speech acts in ordinary language. The central question concerning how language as acts of speech refers to objects and states of affairs is: How do the physical properties of speech acts (as spoken sounds, gestures, or marks on paper) refer to or represent semantic meaning that lies beyond the physical manifestations themselves? How do bodily gestures and material objects, which are not intrinsically intentionalistic, derive their meaning? As the example of the dollar bill illustrates, there is a double level of intentionality in both the performance and perception of meaningful representations across disparate domains. There is first the intentionality with which the utterance (or materiality) is physically created (or perceived). There is then a second-level intentionality that confers the conditions of satisfaction of its intentional state (for instance beliefs or desires) *onto* the conditions of satisfaction of the first level of intentionality. The workings of this double level of intentionality explain why, as Searle points out:

meaning exists only where there is a distinction between Intentional content and the *form* of its externalization, and to ask for meaning is to ask for an Intentional content that goes with the *form* of externalization.⁵⁸ (my emphases)

⁵⁸ Searle, *Intentionality*, 28.

In the context of speech acts, this is to say that the physical action is the material vehicle by way of which one means something. Once a second level of intentionality has been conferred onto the physical action, the action as a materiality represents meanings, conceptual notions, institutional values etc. over and above its manifest physical features. It can then be said that the entire speech act package, now carrying its own set of conditions of satisfaction (*that* such and such), will be satisfied if and only if the expressed psychological state of the second level of intentionality is satisfied under its prescribed conditions of satisfaction and direction of fit.

I argue that a similar, though not identical, structure pertains to meaningful musical utterances. It is likewise the case that products of musical materiality are not in-and-of-themselves intrinsically meaningful—they become meaningful only after conscious agents have attached a second level of intentionality onto the material product. It is crucial—for the purposes of exploring the elasticity inherent in the broad range of ways that musical materiality relates to meaning—to maintain the distinction between the two levels of intentionality, especially in cases where there might seem to be an intimate affinity between the musical materiality (and our first level experiences of it) and its projected set of meanings.⁵⁹

The intentionalistic structures of a meaningful musical utterance likewise involve the intentional conferring of a (second level) set of conditions of satisfaction onto (first level) experiences of actions and perceptions. Musical sounds and actions when performed with meaningful intention gain a set of

⁵⁹ As an analogy, recall Small's example of baring of teeth as an instance of gestural language (footnote No. 1).

derived representational qualities⁶⁰ that are themselves derivative of the biological functions of intentionality. These views regard meaningful musical production as a close cousin of other human capacities such as linguistic, gestural, and visual representation. Yet while the direction of fit determined by the psychological mode of the (second-level) intentionality in ordinary language, for instance, can flow equally in either direction (for instance, one makes statements about beliefs or desires with equal ease), the default direction of fit of the second-level intentionality of musical utterances, I argue, occurs under the mind-to-world direction of fit.⁶¹

We are now in a position to make formal the key components of a theory of musical intentionality. **Example 0.3** summarizes the “flow” of intentionality that gives rise to a meaningful musical utterance. The set of intentionalities shown on the left-hand side of the example engenders what I have been calling the first level of experience (or representation) of physical materiality, including embodied actions. The right-hand set of intentionalities engenders representations of conceptual meaning attached onto the physical manifestations of the musical utterance. The upper dashed arrow shows the process of imposing the second layer of intentionality onto the first, while the lower (two-way) dashed arrow illustrates the continuum of possible relations between materiality and meaning that might exist, and more importantly the

⁶⁰ The notion of “representation” here and throughout the dissertation is used not in the (more narrow) sense of programmatic representation, but in the broader sense of mental representation.

⁶¹ By contrast, an example of a world-to-mind musical utterance is the case of bugle calls in military contexts. Such utterances constitute an example whereby music gestures can be used as “directives” whose conditions of satisfaction are satisfied if and only if when a change in some state of affairs in the world takes place.

ontological basis of those relations. The theoretical framework serves to ground the analytic goals for the remainder of the dissertation: to explore moments when the physical sense of “what it is like” to execute a musical gesture comes into dialogue with the musical utterance’s associated network of meanings. Framed more formally, such moments occur when the intentional content (i.e. conditions of satisfaction) of the (first level) intentionality that causes the physical action becomes part of the intentional content (conditions of satisfaction) of the (second level) musical meaning(s) that are conferred onto that action.

1.7 Aspectual Shapes as Enabling Translator

The final component that needs to be appended to a theory of musical intentionality is the notion of aspects, what Frege called “modes of presentation.”⁶² Intentional states represent their contents/ conditions of satisfaction under certain aspects and not others. A common cited example of an aspectual shape is water and H₂O. A desire for water does not equate to a desire for H₂O: a person might not be aware that water is H₂O, or alternatively might believe that water is in fact H₂O. Moreover, owing to the intrinsic subjectivity of mental representations, intentional contents and their objects are represented under unique aspects. I argue that the relation between musical materiality and meaning depends in great part on this feature of

⁶² Gottlob Frege, “On *Sinn* and *Bedeutung*,” in *The Frege Reader*, trans. Max Black ed. Michael Beaney (Oxford: Blackwell Publishers, 1997), 151-71. Frege’s paper was first published in the *Zeitschrift für Philosophie und philosophische Kritik* 100 (1892): 25-50.

intentionality. The capacity for intentionality to represent the same object under different aspects enables a kind of “translation” across different domains of experience. In terms of musical intentionality, it is the phenomenon of aspectual representation that enables relations to hold between the two different levels of intentionality: the embodied/material domain and the conceptual domain. The aspect(s) under which physical senses of doing or perceiving a musical gesture are intentionalistically represented *become related to* the aspect(s) represented in the intentional content of the meaning.

In musical discourse, the theoretical systems of music theory and analysis are rife with implications of aspectual shape. For instance, the commonly voiced claim that something is heard “as such and such” implicitly points to the aspectual shapes (or modes of representation) attendant to a given theoretical paradigm or some specific way of listening. The possibilities range from basic notions such as pivot chords, to Schenkerian voice leading structures, to Gjerdingenian schemata, to units of pitch class sets, or to complex Lewinian modes of perception, and so on. Depending upon context, different aspects can often be attached onto a singular encounter with a given physical utterance in a manner that echoes Weber’s *Mehrdeutigkeit*, Carl Schachter’s “Either/Or,” and much of Lewin’s analytic ideal of multiple enactments, among others.⁶³ A sonority consisting of a major triad plus a minor third, for

⁶³ See Janna Saslaw, “Gottfried Weber and Multiple Meaning,” *Theoria* 5 (1990): 74-103; Carl Schachter, “Either/Or,” in *Schenker Studies*, ed. Hedi Siegel (Cambridge: Cambridge University Press, 1990), 165-79; Steven Rings, “Review of David Lewin, *Generalized Musical Intervals and Transformations, Musical Form and Musical Transformation: Four Analytic Essays, Studies in Music with Text*,” *Journal of Music Theory* 50/1 (2006): 111-27.

instance, can be simultaneously represented as (or “heard as,” to append it an intentional state) a V^7 , an augmented sixth, set class 4-27, or [0258]. Though the above examples are all conceptual aspects, there are certain classes of aspects that allow for translation to occur between conceptual and embodied representational contents. The senses of “up”-beats and “down”-beats, for instance, though now widely established as conceptual notions, owe their origins to highly embodied aspectual shapes. For such kinds of rhythmic notions, the first-level action- and perception-based representations often work in close conjunction with the more abstract notions such as harmony, form, and meter (see **Chapter Three**).

The theory of musical intentionality presented in this chapter aims to establish a framework that enables the exploration of relations between conceptual meaning and aspects of musical materiality more generally. The purpose of the next chapter is to fashion a music-analytic methodology, building on the work of David Lewin, that will facilitate that exploration in actual musical contexts.

CHAPTER TWO

TOWARDS AN ANALYTIC METHODOLOGY

2.1 Intentionality and Lewinian Transformational Theory

In **Chapter One**, I developed a philosophical theory of musical intentionality. The theory—which extends from John Searle’s general theory of intentionality and the theory of speech acts—seeks to make formal the intentionalistic structures that animate relations between materiality and meaning specific to musical practices. The theory has shown how material features of musical utterances relate to their conceptual meanings on the basis of human intentionality and its logical structures. More specifically, the theory demonstrates that the basic structure of a meaningful musical utterance involves two levels of intentionality: one that carries out the physical aspects of the musical action (in the here and now) and another that represents conceptual meaning(s) imposed onto the action.

In order to explore how these levels of intentionality relate in actual musical contexts in **Part II**, I develop in this chapter a music-analytic framework that models multiple levels of musical intentionality and their interactions. To be sure, most existing music-analytic methodologies model aspects of human intentionality with varying degrees of explicitness.⁶⁴ Nevertheless, among existing analytic methodologies Lewinian transformational theory is one of the most self-consciously and self-reflexively

⁶⁴ Even Schenkerian analysis, a tradition that has come under scrutiny for ostensibly stating “facts” about the “music itself,” frequently points to the intentionality of its claims with statements such as “I *hear* x as y.” See footnote no. 24 in **Introduction**.

intentionalistic.⁶⁵ Three features of this theory lend themselves to the exploration of musical intentionality: 1. the theory explicitly sets out to model interactions between multiple levels of what Lewin calls musical “experiences”⁶⁶—including but not limited to “perceptions,” “intuitions,” and “enactments”—during the musical activities of composition, listening, performing, ear-training, etc.; 2. such kinds of “experiences” inherently involve rich intentionalistic implications; and 3. the generalizing powers of mathematical group theory provide a means of “translation” (often in the form of isographies) for relating different domains of musical experiences. Lewin’s notion of a musical space, one that is integral to his transformational theories, describes not only a set of musical objects and their relationships, but more importantly the accompanying human perspective(s) that engender such relationships: in other words, intentionalistic state(s).

Yet Lewinian transformational theory as it stands remains a problematic framework for analyzing musical actions (and intentionality more generally) in the terms I develop in this dissertation. To begin, we need to examine the kinds of relations that Lewin draws between the formal components of his theories and their intentionalistic implications. Throughout his writings, Lewin’s predominantly post-Husserlian outlook underpins how he frames the intentionalistic implications of his transformational and other

⁶⁵ In addition to footnote no. 25 in **Introduction**, see: Ramon Satyendra, “An Informal Introduction to Some Formal Concepts From Lewin’s Transformational Theory,” *Journal of Music Theory* 48 (2004): 135 where he writes: “A music theory for communicating perceptions and intuitions locates music in experience and not in nature.”

⁶⁶ Ibid. “In applying GMT’s [*Generalized Musical Intervals and Transformations* (1987)] theory in analysis, one judiciously selects both a musical space and set of transformations to capture a musical intuition. A passage that stimulates more than one intuition may inspire multiple descriptions, perhaps each with a different choice of space and transformations.”

theories and that when viewed from the perspective of this dissertation these can be seen to harbor several logical difficulties.⁶⁷

In order to formulate an analytic methodology, I first aim to clarify the philosophical bases of Lewin's transformational theories and from there to offer ways to bridge what I argue are their inherent philosophical inconsistencies. The chapter therefore serves a twofold purpose: 1. to re-orient Lewin's existing analytic technologies so that they may account for musical action and its interaction with perception and meaning, and 2. in the process, to formulate an analytic methodology for the exploration of musical intentionality more generally.

2.2 Lewin's Husserlian vs. Post-Husserlian Phenomenology

The philosophical basis of Lewin's transformational and other theories can be gleaned from the final section (section V) of "Music Theory, Phenomenology, and Modes of Perception" (1986). In it Lewin recognizes the need for a philosophical and analytic framework that could venture beyond modeling musical perceptions (which remains the more familiar mode of engagement for music analysts) toward modeling musical actions.

⁶⁷ For discussions on Lewin's relation to Husserlian and post-Husserlian phenomenology, see: Steven Rings, "Tonality and Transformation" (Ph.D. diss., Yale University, 2006); Brian Kane, "Excavating Lewin's 'Phenomenology,'" *Music Theory Spectrum* 33/1 (2011); Maryam A. Moshaver, "Telos and Temporality: Phenomenology and the Experience of Time in Lewin's Study of Perception," *Journal of the American Musicological Society* 65/1 (2012).

In laying out these ideas and the consequent dissatisfaction with his own P(perceptual)-model in this regard, Lewin writes:

...since “music” is something you *do*, and not just something you *perceive* (or understand), a theory of music can not be developed fully from a theory of musical perception (with or without an ancillary dialectic). At least so I maintain.

Making fresh music as a mode of musical perception—this link in the chain of perception-and-creation is missing in the perceptual theories we have so far considered, including my own p-model so far as it has been worked out as yet...After all, Husserl calls perception a mental *act*, and describes it as something extraordinarily creative. I do not see as yet, though, how he might distinguish and relate what we call acts of listening, acts of performing, and acts of composing, as varieties of *perceptual* response in various musical contexts.⁶⁸

The P-model’s principal “failing,” according to Lewin himself, is that it does not account for aspects of musical action and its relation to both perception and meaning. As Brian Kane has recently argued, Lewin’s seeming dead-end with regard to the P-model stems in part from a tension between his earlier (explicit) Husserlian framework for his P-model and his later (implicit) philosophical turn toward a post-Husserlian phenomenology.⁶⁹ This incompatibility, which is responsible for Lewin’s avowed dissatisfaction, stems in part from two contrasting views regarding the functions of the (observing) subject and the (observed) object: in the most general terms,

⁶⁸ David Lewin, “Music Theory, Phenomenology, and Modes of Perception,” *Music Perception* 3/4 (1986): 377, 381.

⁶⁹ Brian Kane, 27-36.

Husserlian phenomenology embraces this distinction while post-Husserlian phenomenologies seek to break it down. The impression one gains from Part V of “Music Theory, Phenomenology” is that the Husserlian phenomenological apparatus, which had helped Lewin erect the P-model, fell short of leading the model to accomplish what he had hoped it would, namely to more broadly account for musical actions beyond perceptions. This realization leads Lewin to dramatically reject the Husserlian framework in favor of a post-Husserlian phenomenology, though stopping short of pursuing the latter formally in the context of the article.

Contrasting with Lewin’s own assessment, I propose in this chapter ways to extend Lewin’s Husserlian framework via Searlean notions that I argue will enable Lewinian’s existing analytic technologies to fill that gap.⁷⁰

2.3 The Intentionalistic Implications of Lewin’s “GIS/Intervallic” and “Transformational” Attitudes

To pursue that end, I first examine Lewin’s transformational theories and their suggested intentionalistic implications as outlined in his 1987 *Generalized Musical Intervals and Transformations* (henceforth *GMIT*). In *GMIT* Lewin presents his transformational theories as analytic tools broadly conceived to model *both* “perceptions” and “doings.” The transformational apparatus purports to relate meaning with the broader contexts of bodily

⁷⁰ My view contrasts not only with those of Lewin himself, but additionally with those of Kane, who speculates with reference to the P-model that: “possibility remains open for one to pursue the *themes* introduced in Part V of the [“Phenomenology”] essay through an application of post-Husserlian phenomenology, in particular, through a close study of Merleau-Ponty.” *Ibid.*, 35.

intentionality. With his celebrated figure from *GMIT*— replicated earlier as **Example 0.2**—Lewin presents two contrasting but complementary modes of musical engagement, what he terms the Cartesian-intervallic attitude and the transformational attitude. To explore each mode, Lewin formulates two sets of analytic tools: the so-called Generalized Interval System (GIS) for the former and more wide-ranging group theoretic systems for the latter. These modes of musical engagement amount to what are essentially two contrasting classes of intentionalities that enact the abstract components of **Example 0.2**. Lewin’s presentation places significant emphasis on the active verbs with which analysts and musicians construe musical relations.⁷¹ In ways comparable to the guiding premise of speech act theory, which seeks to understand linguistic meaning from the perspective of speaker intention, Lewin’s conceptions of music theory and analysis are similarly grounded in the intentionalities of conscious agents.

The principal innovation of Lewin’s transformational attitude involves re-conceiving familiar notions of intervallic distance as various kinds of human “doings” that enact the imagined “distance” between musical objects. Yet Lewin’s “doings” do not for the most part model intrinsic intentionalities that animate real-world actions, but rather model *senses* of actions: that is to say Lewin’s transformational “actions” and “doings” are less embodied actions in any real-world sense than they are conceptual values.⁷² Conversely,

⁷¹ For such examples, see David Lewin, *Generalized Musical Intervals and Transformations* (New Haven: Yale University Press, 1987), xxix, xxxi, 158-159.

⁷² This view corroborated by Ring’s observations: “...it is clear that Lewin does not intend all transformations to be understood so literally. As his writings make clear, he primarily intends the concept metaphorically, or as a simile: the mindset of the transformational analyst is *like* the

Lewin frames the Cartesian intervallic attitude as principally a passive mode of engagement on the part of the agent, a mode in which one passively perceives or measures a distance out there in some musical space. The GIS formula $int(s, t) = i$ serves as the essential analytic formalism of the intervallic attitude. The *int* function, in intentionalistic terms, characterizes the intentional state of the agent's "stance" in relation to the music; in Lewin's presentation, *int* is a perceptual act in which the agent observes "a measurement of extension between points *s* and *t*... passively 'out there' in a Cartesian *res extensa*."⁷³ Yet that perception (especially when viewed in light of the biological naturalist notions of mind) involves a greater degree of active intentionality than Lewin is willing to acknowledge. Despite Lewin's characterization ("passively out there"), the *int* function nonetheless represents "action(s)" carried out by a conscious agent.⁷⁴ Such perceptual acts are in fact supported by the full family of intentionalistic notions outlined in **Chapter One**—including psychological state, representations of propositional content, conditions of satisfaction, aspectual shape, and direction of fit. Without needing to invoke the transformational attitude, the intervallic attitude itself fully engages the active verbs of perception to signify active processes of intentionality and its associated concepts. The question therefore

mindset of the performer. See Rings, "Tonality and Transformations," 50. One notable instance of Lewin speaking of concrete performative actions occurs in his analysis of Debussy's "Feux D'Artifice." See Lewin, *Musical Form and Transformation: Four Analytic Essays* (New Haven: Yale University Press, 1993), 157.

⁷³ Lewin, *Generalized Musical Intervals and Transformations*, xxxi.

⁷⁴ For instance, the familiar classes of intervals for the pitch domain are almost never purely representations of observer-independent facts but rather represent distinct conceptual notions imbued with music-theoretical, cultural, and other values. Rings' analysis of Bach's Cello Suite in G in *Tonality and Transformations* (New York: Oxford University Press, 2011), 21-24 illustrates this point.

is not whether functions of intentionality are present or absent in one attitude or another—they are present in both. The question, rather, is whether there are indeed meaningful differences in the intentionalistic structures that underlie the two contrasting attitudes and how these “intuitions” can be analyzed in musical contexts.

2.4 Lewinian Analytic Technologies and Their Intentionalistic Structures

In *GMIT* Lewin further draws correlations between his analytic technologies and their underlying musical intuitions. The formal technology of GIS groups is conceived to model the intuition of an agent in the posture of an observer “measuring” a Cartesian point-space external to himself. Alternatively, the STRANS (simply transitive) and other technologies of the transformational attitude can be tailored to accommodate intuition(s) comparable to those of a composer or performer who carries out musical processes from *within* the performing body.⁷⁵ In short, Lewin intends that transformational technologies model intentionalities of musical actions while GIS technologies model intentionalities of musical perceptions. The former are constituted by the transformational formula $Ti(s) = t$, which re-conceptualizes the intervallically-inspired GIS formula. For Lewin, the contrasting group-theoretic characteristics of the two formalisms capture a distinction in the

⁷⁵ Lewin, *GMIT*, 158-59.

conscious agent's intentionalistic stance, namely the difference between a perceptual and an active relation to the world.⁷⁶

I argue, however, that the distinction between Lewin's transformational and intervallic attitudes stems from intrinsic differences in the intentionalistic structures of perception and action—and specifically from their contrasting directions of fit—rather than from differences between their group-theoretic structures. **Table 2.1** outlines Lewin's analytical technologies and relates them to the intentionalistic implications that Lewin ascribes to the analytic formalisms. The table presents GIS groups and their associated “passive” mode of enactment, on the one hand, and the broader group-theoretic possibilities of transformational groups and their associated “active” mode of enactment on the other. The table then delineates the implicit intentionalistic structures of Lewin's two contrasting attitudes. Perception belongs to the “cognitive” class of intentionality while action belongs to the “volitional” (see **Table 1.1**). Lewin's passive metaphor for the GIS/intervallic attitude is hereby defined concretely by the *m-w* (mind-to-world) direction of fit characteristic of cognitive states, while his active metaphor for the transformational attitude is defined concretely by the *w-m* (world-to-mind) direction of fit characteristic of volitional states.

Inferring from **Table 2.1**, we might posit an additional (non-trivial) correlation between the two group-theoretic structures on the one hand, and the two intentionalistic structures on the other. In terms of the intentionalistic structures, perception takes logical priority over action in human and animal

⁷⁶ See Lewin's oft-cited statement from *GMIT*, xxxi: “If I am at *s* and wish to get to *t*, what characteristic gesture should I perform in order to arrive there?”

intentionalistic behavior: a conscious agent can have perception without action but there can be no intentional action without some kind of perceptual ability. It is in this sense that the intentionalistic structures of action can be said to logically subsume those of perception. Analogously, in terms of the group-theoretic structures of GIS and transformational systems, the broader scope of transformational groups subsumes the more narrowly-defined GIS groups. As Lewin points out, all GIS groups can be conceived transformationally as simply transitive (STRANS) groups, yet crucially not all transformational groups are simply transitive. The possible groups of the transformational perspective are thereby conceptually broader and offer a wider range of application than the GIS perspective.⁷⁷ Yet notwithstanding this observable correlation between intentionalistic structures and group-theoretic structures, I argue in the following section that group-theoretic distinctions do not determine the kinds of intentionalistic distinctions Lewin wishes to draw between the two analytic attitudes and systems.

2.5 Lewin's Conceptual Gap: I

An impression one might glean from Lewin's distinction between the intervallic and transformational attitudes is that there is a direct correlation between the two group-theoretic structures and their application in real-world musical contexts. Framed in the philosophical terms presented here, Lewin's

⁷⁷ It is worth noting that Lewin introduces semigroups in Chapter 1 of *GMIT*. Certain transformations—for instance those that are not one-to-one and onto—inhabit semigroups, not groups. This is another feature in which the transformational attitude is broader in scope and application than the GIS attitude.

position might be described as: GIS groups model “passive” cognitive intentional states with $m-w$ fit; STRANS/transformational groups model “active” volitional intentional states with $w-m$ fit. Yet difficulties with this division arise when we reflect on both Lewin’s descriptions of the intervallic and transformational attitudes and their group-theoretic apparatuses. The problem is that it is equally conceivable that one can mentally represent propositional contents that have as their conditions of satisfaction transformational functions under so-called “passive” cognitive states (under the $m-w$ direction of fit). Like GIS intervals, most of Lewin’s transformational functions are in fact representations of conceptual notions rather than embodied actions. Conversely, it is difficult to conceive how one might observe a measurement of a distance “out there” in the world without the “active” workings of cognitive and perceptual intentionalities. Just as one can believe (under $m-w$ fit) that the distance between s and t is i , one can equally believe (under the same $m-w$ fit) that Ti is the functional operator that relates the input s to the output t , as exemplified by the transformational formula $Ti(s) = t$.

To frame this in a different way, I argue that the formal properties of transformational groups are not confined to modeling the volitional class of intentionalities in musical contexts, nor are the formal properties of GISes confined to modeling cognitive intentionalities. All of the analytic examples in *GMIT* that aim to illustrate the transformational apparatus can equally be interpreted as depicting different classes of mental beliefs.⁷⁸ To be sure, Lewin

⁷⁸ See footnote No. 72 above.

intuitively grasps that the intentionalities of perception and action are fundamental to a multitude of musical practices. However, once we base our understanding on how human agents relate to the world through the biological capacities of intentionality, it becomes clear that the attendant intentionalities of Lewin's transformational functions more often represent "as-if" intentions-in-action than any real-world intentional actions. The essential distinction between GIS/intervallic and transformational spaces is not so much that the two spaces inherently determine different classes of intentional states (with different directions of fit). Rather, I argue that the distinction lies in the internal *character* of their implied intentional contents, that is to say, the aspectual shapes that make up their respective contents.⁷⁹ The musical "doings" evoked in *GMIT* are indeed aspectual shapes underlying the cognitive content at the second level of intentionality (CS₂); and when such contents represent the group-theoretic properties of either GIS or transformational space, the contents take on conditions of satisfaction defined by those group properties.

The foregoing discussion of GIS/intervallic and transformational models and their intentionalistic implications claims that both models can partake of the same (*m-w*) class of intentionality. This view is more nearly consistent with Lewin's own emphasis on the complementary rather than dialectical relationship between the two formalisms; though not made explicit, the view for the most part conforms to Lewin's own analytic practices. On this

⁷⁹ Recalling **Chapter One**, intentional states represent their conditions of satisfaction under aspects, or in Fregean terms, "modes of representation." Familiar examples of aspectual shape cited in the philosophical literature are Wittgenstein's duck vs. rabbit image, Frege's morning star vs. evening star.

point, Julian Hook has pointed out that Lewin moves to integrate the two notions almost as soon as he introduces the STRANS transformational apparatus and its attendant agential attitude.⁸⁰ Citing the relevant passage from Lewin:

More significant than this dichotomy, I believe, is the *generalizing* power of the transformational attitude: It enables us to *subsume* the theory of GIS structure, along with the theory of simply transitive groups, into a broader theory of transformations. This enables us to consider intervals-between-things and transpositional-relations-between-Gestalts not as alternatives, but as the *same* phenomenon manifested in different ways.⁸¹ [emphases original]

Framed in the intentionalistic terms offered here, it can be said that different ways of manifesting the same phenomenon can be understood as multiple aspectual shapes under representation. Such intentionalistic notions are very much inherent in Lewin's conceptions of musical space and musical "intuitions." Given the same set of musical objects, the groups of GIS intervals or transformational functions typically define the principal aspectual shapes under representation (*p*) and their accompanying intentional states (*S*). When Lewin juggles between GIS intervals and STRANS transformations, he is in essence construing the same object or phenomenon under different aspects of representation. Similarly with reference to Lewin's P-model (which I discuss in the following section), Brian Kane has suggested that the "STatement" list likewise describes the various ways of construing a given musical object,

⁸⁰ Julian Hook, "David Lewin and the Complexity of the Beautiful," *Intégral* 21 (2007): 173-174.

⁸¹ Lewin, *GMIT*, 159.

amounting to Frege's "modes of representation"—a closely related concept to that of aspectual representation.⁸²

The notion that the same musical phenomenon can be manifested—more precisely, intentionalistically represented—in different ways by the agent is pervasive throughout Lewin's analytic thinking and practice. It is likewise a central concern of this dissertation to explore how different intentionalistic representations (specifically for musical materiality and meaning) relate in musical practice. It is on this shared concern that I argue Lewin's analytic and theoretic framework can be re-framed and brought to bear on relations between different levels of musical intentionality. My aim in this and the previous sections has been to clarify the intentionalistic implications of Lewin's theoretical constructs, and to show how the circle of intentionalistic concepts (such as intentional state or psychological mode, intentional content, conditions of satisfaction, aspectual shape, direction of fit) outlined in **Chapter One** bears on the various technical components of Lewin's formalisms (such as the notions of musical space, the set of musical elements, groups of intervals and functions). My point is not to negate the conceptual framework behind Lewin's GIS and transformational models but rather to articulate precisely the kinds of intentionalistic intuitions they serve to model.

⁸² Kane, "Excavating Lewin's 'Phenomenology,'" 29-31. Depending upon musical context, certain aspectual shapes might avail themselves as either more or less appropriate than others. The decision on the part of the analyst can often pose fundamental questions about the essential "premise" of the composition at hand. See Lewin, *GMIT*, 246.

2.6 Lewin's Gap: II

In "Music Theory, Phenomenology, and Modes of Perception" (henceforth *MTPP*) Lewin shows signs that he was conscious of the kinds of conceptual gaps in *GMIT* I have pointed out, that he was alert to the metaphorical status of transformational "doings." As mentioned in 2.2, Lewin in the final section of *MTPP* makes a stronger argument than he does in *GMIT* against what he considers to be the overwhelming stance in musical analytic engagement, namely that of "passive" perception as the primary mode of analytic contact. Returning to "Section V" of *MTPP*, Lewin, as he does in *GMIT*, expounds on the division between subject and object that underlies all purely perceptual acts: a *modus operandi* which he calls "X/Y" perception.⁸³ The act of listening, for instance, is for Lewin one manifestation of such an "X/Y" mode of perception, which, as he argues, contrasts with those of composing or performing. Evoking once more the passive/active axis, he echoes arguments made in *GMIT* by framing listening as a passive activity that projects externally and away from the agent, as contrasted with composition and performance which are actively embodied within the agent.⁸⁴ In connection with his own P-model, these views lead Lewin to argue that the

⁸³ As is the case with *GMIT*, *MTPP* places the perceptual consciousness of the agent at the foreground of musical analytic practice. I believe both works can (and should) be read as a synoptic pair representing a consistent vision. As with *GMIT*, *MTPP* insists on the plurality of musical experience and locates that plurality in variations of temporality and the available discursive contexts and spaces. Such concepts resonate with Searle's notions of the "network" and "background." For these latter concepts, see Searle, *Intentionality*, 65-71.

⁸⁴ We might wish to read this in conjunction with Lewin's desire to expand upon—though not reject—the GIS/intervallic model and its underlying philosophical premise. Lewin, at the very least in *GMIT*, never gave up the intervallic language and its attendant mode of listening. On this point, see Hook, "Review," 172-74.

P-model and its accompanying philosophies fit poorly with the “present-tense activities of composers and performers.”⁸⁵ Pure perception in analysis fails to capture a mode of musical enactment that is paradigmatic of composition and performance.

These views pry open another conceptual gap in Lewin’s thought that might be articulated by posing the following questions: 1. If perception also plays a role in the modalities of composition and performance, which it necessarily does, what is that role precisely? 2. What are then the causal relations between perception and creative action in musical production—and specifically in relation to musical utterances for the purposes of this dissertation? Though surely aware of these pressing questions, Lewin does not set out to provide answers. Rather his purpose, as he asserts, is to alert us to the inadequacy of a purely perceptually-driven music theory.

Drawing upon the philosophical terms developed in **Chapter One**, I aim in what follows to bridge the two conceptual “gaps” in Lewin’s theories. By way of re-orienting the intentionalistic implications of both GIS and transformational systems and Lewin’s so-called “X/Y” perceptions, I suggest that we can begin to conceive of alternative ways in which Lewin’s various technical apparatuses—GIS intervals, transformational functions, and the P-model—might model embodied features of musical intentionality. Through this I aim to achieve two goals: 1. to contribute to the critical evaluation of Lewin’s theories, specifically the relation between their technical formalisms and philosophical implications; and 2. to derive a music-analytic framework

⁸⁵ Lewin, “*MTPP*,” 375.

that explores the interaction between musical materiality and meaning in actual musical contexts.

2.7 Towards an Intentionalistic Re-orientation of Lewin's Theories

To begin, we need to first account for how “X/Y” perception might relate to creative actions. I have argued that, despite Lewin’s “passive” framing, such “X/Y” perceptions are in fact fully active intentionalistic phenomena. Moreover, the intentionality of perception partakes in a complex network of other intentionalities to engender many types of musical actions we practice as musicians, including not least the production of meaningful musical utterances (the unit of analysis for this dissertation). Perception, in this more inclusive sense, is therefore distinct from action. Yet the distinction is not based on an embodied vs. disembodied dichotomy, as Lewin presents it; rather, both are eminently “embodied” in the neurobiological systems as part of our intentionalistic capacities. Lewin’s argument that perception involves grafting a distance between subject and object, that the perceived object is an entity “out there” and “other than” the perceiving subject, loses its rhetorical force when we consider that any sentient human (and animal) perception entails some internal form of active mental representation. The status of music “as-it-is-being,”⁸⁶ which Lewin accords only to action and not perception, is applicable for both modalities.

⁸⁶ Ibid., 374.

One more feature intrinsic to perception that it shares with action is its self-reflexivity; this is, the intentionalities of both perception and action represent their conditions of satisfaction *indexically* (see **Chapter One**). This self-reflexive feature enables both the perceiving and acting subjects to have active and lived phenomenological experiences, which are constitutive of the agent's conscious state. During both activities, the intentionalities impart a phenomenological immediacy to the agent in ways that are not necessarily true of other types of intentional states, such as imagination or hope, which do not share the quality of *presentedness*.

In the context of musical practice, we can broaden the notion of perception still further beyond Lewin's "X/Y" notion. Owing to its *m-w* direction of fit, perception can be understood more generally to encompass a set of intentionalities within the larger family of cognitive intentionalities. "Perception" can thus be generalized—in ways that remain consistent with Lewin's analytic practice—to belong to the second level of intentionality (CS₂) that represents conceptual meanings and values (this is the kind of structure that underlies common examples of analytical language such as "I perceive this chord as a German augmented 6th"). Within this second level there could be both "creative" intentionalities (such as beliefs, imaginations, and convictions) as well as the more nearly perceptual intentionalities. Unlike Lewin's "X/Y" perception, however, these intentionalities need not represent only "static" or "after the fact" objects or be about something that exists "out there." Perception as framed in this broader sense can actively represent any aspect of meaning beyond the purely physical manifestations of materiality.

Enlarging Lewin's framing of perception enables a richer appreciation of the complexities inherent even in the more nearly "pure" perceptual acts, such as listening, which in Lewin's "X/Y" account is framed passively and seemingly devoid of active imaginative input. His view, it seems, downplays the fact that musical listening typically involves two levels of perception. It would be difficult, for instance, for most people to listen to the opening of Beethoven's Fifth Symphony purely in terms of the "X/Y" sense; second level meanings and values will invariably enter the listeners' networks of intentionalities and these will be represented under a *m-w* direction of fit.⁸⁷ The contents of these *m-w* perceptions might equally well comprise GIS intervallic values, transformational functions, or other kinds of conceptual propositional contents. All such intentional contents are examples of human values that are not intrinsic to their associated musical materiality, much in the same way that the "perception" of monetary value is not intrinsic to the dollar bill as a material object.

We recall from **Chapter One** that the intentionalistic structure of a meaningful musical utterance involves two levels of intentionality: one that enacts the musical action and another that represents the conceptual meaning(s) imposed onto that action. At the first level, such intentional actions require an accompanying set of *m-w* perceptual intentionalities, of the kind of "X/Y" perception to which Lewin alludes. Once the significance of the musical utterance extends beyond its physical features and begins to represent

⁸⁷ Indeed, readers familiar with *MTPP* will be able to recognize that midway through Lewin's argument, the notion of perception itself begins to exceed the purview of the initial "X/Y" paradigm. Lewin, "*MTPP*," 381-82.

meaning, the materiality of those actions then takes on conceptual meanings that are brought about by the second level of intentionality.

Example 2.1 illustrates the “flow” of the intentionalistic structure of a meaningful musical utterance and attempts to show how Lewin’s formal apparatuses fit within this revised framework. The example re-orientes the intentionalistic implications of Lewin’s terms and notions from *GMIT* and *MTPP*. Understood more literally, the “X/Y” perception, which Lewin deems to be purely passive in nature, is shown to be part of the network of intentionalities that contribute to the more nearly physical aspects of musical production rather than in opposition to musical action. On the other hand, GIS intervals, transformational functions, and the contents of P-models are shown to be part of the intentional content (as conditions of satisfaction) of *m-w* cognitive intentionalities that belong to the second level of intentionality. In this view, their purported contrasting identities as passive observations (GIS) on the one hand and active doings (transformations) on the other dissolve within this more expanded understanding of musical action and meaning.

At a deeper level, the intentionalistic structure represented by **Example 2.1** aims to break down the prevalent dichotomies that can be traced back to Descartes’ dualist notions of *res cogitans* and *res extensa*, which tacitly structure several other current musicological discourses, such as Carolyn Abbate’s “gnostic” versus “drastic,” Jankélévitch’s the mentally conceptual versus the phenomenologically embodied, Christopher Small’s score-based conceptual analysis versus practice-based embodied performance, Emily Dolan’s

“ideality” versus “materiality.”⁸⁸ Perhaps sensing the inadequacies of dualism, a consistent trend in current musicological discourse has been to reject the perceived hegemony of the mental and to favor a metaphysics of embodiment, phenomenology, and materiality. Lewin’s dualistic framings of embodied doings versus disembodied perception/observation likewise partake in this revisionist trend. Yet as I have argued in earlier parts of this dissertation, without a fundamental re-thinking of the ontology of the mental in biological terms, dualist thought can be seen to persist despite the so-called material turn.

Having shown how Lewin’s theoretical constructs could potentially model alternative intentionalistic structures, the following sections will demonstrate how they might be re-fashioned into a methodology that can then model and explore the relation between musical materiality and meaning.

2.8 Towards an Analytic Methodology for Musical Intentionality:

Reconceiving $s \rightarrow t$

Taking Lewin’s well-known $s \rightarrow t$ opening gambit from *GMIT*,

Example 2.2 shows how the concept can be re-adapted into a general methodological framework that serves to model the two levels of

⁸⁸ Carolyn Abbate, “Music—Drastic or Gnostic?” *Critical Inquiry* 30/3 (2004): 505-36; Vladimir Jankélévitch, *Music and the Ineffable*, trans. Carolyn Abbate (Princeton: Princeton University Press, 2003); Christopher Small, *Musicking: The Meanings of Performing and Listening* (Middletown: Wesleyan University Press, 1998); Emily Dolan, *The Orchestral Revolution: Haydn and the Technologies of Timbre* (Cambridge: Cambridge University Press, 2013).

intentionality in musical utterances. Points “s” and “t” depict musical objects in some physical space. The symbol “i1” depicts the conditions of satisfaction (CS₁) of embodied actions, which, as I argued, necessarily encompass a network of indexical perceptions. The “i1” arrow between “s” and “t” can represent a wide array of physical actions that traverse between musical objects: a vocal exertion, a fingering, a bowing pattern, and so on. “i2” on the other hand depicts the conditions of satisfaction in the domain of conceptual meaning (CS₂). The “i2” arrow can represent any aspectual shape attending to conceptual values that we might also attribute as the “distance” between musical objects: a voice-leading connection, a transpositional or inversional value, a schema, a *topos*, and so on. The single-direction upper dashed line depicts the imposition of “i2” onto “i1” that takes place during the production of meaning, whereas the dual-direction lower dotted line captures the principal focus of this dissertation: the relation between the two classes of mental representations and their respective contents.

The methodology represented by **Example 2.2** provides a basis to creatively explore, in a manner of speaking, “what it feels like” to perform or perceive a given musical gesture and how that experience relates to, (re)shapes, or contradicts the meanings that that gesture conveys. Conversely, the methodology enables the exploration of how different categories of musical meaning—whether they be Schenkerian voice-leading structures, *partimenti* schemata, *topoi*, pitch-class sets, etc.—can likewise inflect on the mental representations of embodied doings. The methodology offers a two-way exploration of these relations and offers a platform to explore not only the

dimensions of materiality and meaning separately, but more importantly, the mutually enriching relations they inhabit.

2.9 Analytic Vignette: Chopin Étude Op. 25 No. 1

I close this chapter with a short analytic demonstration. The aim of this analytic vignette is not to explore unfamiliar intuitions (that will be the purpose of **Part II**), but to call upon familiar ones to help demonstrate the methodological apparatus developed thus far.

On the significance of the notation in Chopin's Étude in A-flat major, Op. 25/1, Schenker writes:

The small notation in such cases reveals the middleground elements, directing the reader or player more easily into the path which leads to the true sense of the music. Chopin very often made use of small notation in passage work, arpeggiations, and other figurations. Perhaps the most interesting example of its use is the notation of the bass in the Étude op. 25 no. 1, where at the first tonic Ab he indicates, by distinguishing between large and small notation, the correct performance even of the bass.⁸⁹

From this brief passage from *Free Composition*, we can see that Schenker understands Chopin's notation as embodying both conceptual and embodied intentions. He "translates" what he takes to be Chopin's conceptual intentions, as gleaned from the notation, into the terms of his own hierarchical theory. For

⁸⁹ Heinrich Schenker, *Free Composition*, trans. Ernst Oster (New York: Pendragon Press, 1978), 98.

Schenker, Chopin's notation reveals the (Schenkerian) middleground for the passage, which for him constitutes the "true sense of the music." Schenker's "sense" is in effect the aspectual shape with which he represents part of the meanings of the passage and which involves highly constructed notions of tonal hierarchy. Although such notions are not intrinsic to the representational content of the first level of intentionality—which is to say that in order to simply physically execute or perceive this excerpt at the bare physical level level, one need not know anything about the tonal language, much less Schenkerian theory—I argue that Schenker's aspectual shapes have the potential to relate intimately with how the physical gestures at the piano are internally represented by the pianist.

As **Example 2.3** shows, the notation of the larger note heads in the outer voices contrasts with the smaller note heads in the middle of the texture. The contrast points to a complex network of embodied knowledge that bring about intersections between the performing body and the instrument. These embodied representational contents might include the performer's perception of his/her hand shape and position, the active rotation of the wrist, the distribution of arm weight towards the outside of the hand away from the thumb, and the perception and manipulation of the instrument's timbre to "hide" the smaller note values, consistent with the performance practices of early nineteenth-century pianism. These descriptions, which are by nature subjective and by no means complete or conclusive, point to the kinds of embodied intentional contents and their aspects that might underlie a pianist's performance of the passage. What is at once intuitive and yet remarkable is

that the qualitative experiences of these embodied actions at the first level of intentionality echo key features of Schenker's middleground elements that mark the aspectual shapes at the second level of intentionality. One way to underscore this kind of "cross-domain mapping" at work might be to say that the mental representations of (physical) "weight" distribution at the keyboard inflect on the structural "weight" distribution of the (conceptual) voice-leading structure. One might go further and say that the stretch of the right hand to F (on 6[^]) in m. 2 likewise corroborates its structural status as a dissonant upper neighbor to 5[^]; the embodied representation of the subtle "tensions" involved in the right hand stretch relates intimately to the conceptual senses of musical tension inherent in the notion of the "dissonant" upper neighbor.⁹⁰ The embodied / material domain thus lends a unique and subjective characterization to the more generic concept of a 5[^]-6[^]-5[^] neighbor motion.

Although I have intended this analytic demonstration to capture something that is more nearly intuitive, the philosophical and methodological framework I have developed serves to formalize these relationships. As I will show in **Part II**, the framework provides the basis to model as-yet unexplored relations between materiality and meaning in various musical contexts. The analytic essays of **Part II** aim to exercise the interpretive potentials afforded by the framework presented here in **Part I**. What follows aim to illuminate the

⁹⁰ This feature is itself part of a broader musical context that includes the dynamic and agogic stretches implied by the hairpin marking.

creative ways with which composers draw on the distinctive intentionalistic features of musical discourse as an essential resource for expression.

CHAPTER THREE

BOWING GESTURES AND STRUCTURAL RHYTHM IN

HAYDN'S STRING QUARTET OP. 64 NO. 3

3.1 Introduction

The terms of large-scale structural downbeats were first introduced by Edward Cone in "Analysis Today" (1960) and subsequently elaborated in *Musical Form and Musical Performance* (1968).⁹¹ Cone explains his terms as follows:

By structural downbeat, of course, I do not mean the arbitrary accentuation of the first beat of every measure; I mean rather phenomena like the articulation by which the cadential chord of a phrase is identified, the weight by which the second phrase of a period is felt as resolving the first, the release of tension with which the tonic of a recapitulation enters...It is just here [at the cadence] that the importance of rhythm to the establishment of tonality emerges, for the cadence is the point in the phrase at which rhythmic emphasis and harmonic function coincide.⁹²

⁹¹ Edward T. Cone, "Analysis Today," *Musical Quarterly* 46/2 (1960): 172-88; *Musical Form and Musical Performance* (New York: Norton, 1968).

⁹² Cone, "Analysis Today," 182-83. Carl Schachter has pointed out that Cone's notion of the "structural downbeat" corresponds closely with Roger Sessions' "accent of weight" from Sessions, *Harmonic Practice* (New York: Harcourt, Brace, and World, 1951), 83-84. Moreover Schachter points out areas of overlap between Cone's ideas of structural rhythm with those of Grosvenor Cooper and Leonard Meyer in *The Rhythmic Structure of Music* (Chicago: University of Chicago Press, 1960). Schachter observes however that Cooper and Meyer's large-scale downbeat accents tend to remain effect continuously for extended sections of music in ways that Cone's structural accents do not. See Schachter, "Rhythm and Linear Analysis: A Preliminary Study," *Music Forum* 4 (1976): 281-334; see specifically footnote No. 26.

In his 1969 dissertation “The Delayed Structural Downbeat and Its Effect on the Tonal and Rhythmic Structure of Sonata Form Recapitulation,” Robert Morgan further expands upon Cone’s notions and defines a structural downbeat as:⁹³

A structural downbeat, as the term clearly implies, is a rhythmic accent of such importance that it assumes structural significance. The word “accent,” of course, is used in musical terminology to describe various kinds of events, and it is important to distinguish the type of accent referred to here from other types...some accents emphasize point of stability while others emphasize points of instability, and some are compositional in nature whereas others are provided by the performer. Downbeat accents, then, are compositional accents (they can, of course be supported by the performer) which emphasize points of stability. They are primarily defined by the completion of various kinds of structural motion and thus depend largely upon more background aspects of the composition than the surface rhythm.

While Cone famously locates musical form in rhythmic structure and makes the claim that one way to achieve effective performance is to make clear the rhythmic life of a composition,⁹⁴ Morgan extends Cone’s notions of form to argue that musical form arises from the interaction between tonal and rhythmic events and that tonal unfolding generates much of what we might call structural rhythm.

Morgan, moreover, makes explicit the distinction between “compositional” accents versus accents that have their sources in

⁹³ Robert Morgan, “The Delayed Structural Downbeat and Its Effect on the Tonal and Rhythmic Structure of Sonata Form Recapitulation,” (Ph.D. diss., Princeton University, 1969), 10-11.

⁹⁴ Cone, *Musical Form*, 31.

performance. To encapsulate this intuition, I cite at length Cone's discussion of the opening chords of Beethoven's *Eroica* symphony, which touches on the principal concern of this chapter:

In every respect, then, the beginning of the *Eroica* is conceived as a completely integrated introduction, not as a mere frame. How can this distinction be realized in musical performance? Only by respecting the basic rhythmic character of these two measures: by recognizing that they constitute an upbeat. No matter that they are *forte* and the ensuing theme *piano*, that they are *tutti*, and the theme, as it were, *concertino*—their basic role is vitiated unless they are somehow conducted and played to be heard as a double upbeat. Although the strings would hardly use up-bow, keeping such a possibility in mind would suggest the requisite lightness and springiness; the heavy accents we so often get almost drown out the theme and prevent a convincing start. Furthermore, an upbeat performance of these measures stresses their kinship both with the parallel measures of dominant harmony immediately preceding the recapitulation, and with the two balancing measures of tonic afterbeat at the very end. These two measures thus offer us a clue to the basic importance of the introduction, an explanation of its frequency: an introduction is an expanded upbeat. Even when, as in Beethoven's Seventh Symphony, it is long, begins with its own strong downbeat, and contains many subdivisions—a true introduction, as opposed to a frame, is an expanded upbeat.⁹⁵

Cone's "upbeat" characterization of these opening measures attributes conceptually based meanings to the passage in context rather than describing something intrinsic in the chords themselves. In Cone's reading, the first two chords of the *Eroica* Symphony, despite resting metrically on downbeats, form

⁹⁵ Cone, *Musical Form*, 23-24.

an extended structural upbeat (or rather, a double upbeat) that leads into the downbeat at m. 3, when the main theme begins. Cone, however, observes a certain complexity: the double *upbeat* status of these first two measures coexists in tension with the *downbeat* status of these chords. And more significantly for present purposes, the chords' structural *upbeat* senses inversely relate to the physical *down*-bow gestures which Cone acknowledges to be their normal musical execution.

This seeming complexity, I argue, reflects the crucial distinction between the two levels of intentionality in musical utterances. In the first two chords of the *Eroica*, Beethoven exploits this distinction as a resource for expression: the downward aspects that underlie the action intentionality of the bowing (that is, the intentional content of the first level of intentionality, CS₁) rubs against the conceptual meanings (CS₂) imposed upon these actions which have upward notions as their representational content. In other words, Beethoven uses *downward* gestures as vehicles to carry meanings of *upward* thrust.

Thus I wish to argue that the familiar notions of structural upbeats and downbeats are conceptual and metaphorical characterizations of energy, and that, through the faculty of intentionality, such conceptualizations intersect in complex ways with the actual physical components of music.⁹⁶ The

⁹⁶ In fact, Cone, in his effort to concretize these notions, calls upon an analogy with that of literally throwing a ball. He writes: "If I throw a ball and you catch it, the completed action must consist of three parts: the throw, the transit, and the catch. There are, so to speak, two fixed points: the initiation of the energy and the goal toward which it is directed; the time and distance between them are spanned by the moving ball. In the same way, the typical musical phrase consists of an initial downbeat (/), a period of motion (U), and a point of arrival marked by a cadential downbeat (\)." Cone, *Musical Form*, 26-27.

philosophical framework offered in this dissertation formalizes the parameters for such relations, while the analytical methodology helps to bring into focus such interplays between structural rhythm and musical action. In what follows, I will explore possible isomorphic relations between the bowing gestures of the prevailing rhythmic motive in the first movement of Haydn's string quartet Op. 64 No. 3 and the movement's recurring patterns of structural rhythm at different levels of form. I will argue that the bowing gestures animate and concretize the otherwise abstract notions of structural rhythm, imparting large-scale *upbeats* and *downbeats* at deep levels of the form with the gestural senses derived from foreground bowing actions.

3.2: The Gestural Properties of the Prevailing Rhythmic Gesture

We begin first with a close analysis of the prevailing rhythmic motive of Haydn's Op. 64 No. 3 quartet first movement and the dynamic shape of its gestural features. **Example 3.1a** shows the opening six-note figure and the bowing motions that activate the figure. This rhythmic motive, the single most important recurring motive of the movement, elicits from the performers a set of gestural articulations that convey the movement's central topical character. The figure involves a pair of upbeat-to-downbeat motions, each directed toward the second notes of their respective pairs. The two-tiered inflection derives from the figure's metrical alignment and its associated bowings. These features are shown in **Example 3.1a** by the two pairs of upward and downward arrows: upward arrows represent up-bow for upbeats, downward

arrows represent down-bow for downbeats.⁹⁷ The first upbeat/up-bow on D enters midway through a 3/4 measure. It leads first to a tentative downbeat/down-bow on the Eb of beat three, which occurs on a relatively strong part of the measure. D then re-begins a second and more intense upbeat, this time leading to a much stronger and definitive downbeat across the barline. Crucially the two down-bows fall on dissonant pitches (Eb and D respectively) with the latter being more emphatic than the former in this regard. The resulting accentual succession: weak-strong-weak-*stronger* leaves a visceral imprint on the performer as he executes the gesture. The analytical notation at the bottom of **Example 3.1**⁹⁸ conveys the performer's intentionalistic representation of the entire gesture; the varying sizes of the arrows further denote the varying strengths of articulation embodied in the bowing strokes.

Inherent in the design of the figure is the sense that the first down-bow/downbeat is retrospectively rendered insufficient for closure due to a subsequent re-initiation of a second up-bow/upbeat which then leads to a stronger arrival, the latter completing the gesture. Because the second downbeat is stronger than the first, more tentative downbeat, the two downbeats are themselves engaged in an “upbeat → downbeat” relationship on the same structural level. As a result, one experiences the two upbeats merging together into a larger single upbeat component for the gesture as a

⁹⁷ Of central importance to my hearing is that Haydn did not notate the work in 6/8 meter, which otherwise would efface the rhythmic motive of its characteristic accentual properties.

⁹⁸ The analytic notation is adapted from Türk's *Klavierschule* but resonates with those found in Fred Lerdahl and Ray Jackendorff, *A Generative Theory of Tonal Music* (Cambridge, MA.: MIT Press, 1983).

whole. In this way, the three notes preceding the barline constitute a single over-arching upbeat momentum that moves into the downbeat of m. 1.

Example 3.1b attempts to show this higher-level representation of the figure.⁹⁹

The expressive character of this opening rhythmic gesture derives in part from the performers' two-fold attempt at "grabbing onto a downbeat." The effort required at the third note to turn the first downbeat back to an upbeat heightens the satisfaction when the second down-bow / downbeat is reached.

The kinds of intentionalistic representations that underlie the execution of the six-note figure can be enacted to relate isomorphically to the movement's large-scale rhythmic structure. I will show that it is precisely the turning of downbeats into upbeats, and the deferral of arrivals, that underpin the expressivity of much of the movement's structural rhythm.

3.3 Theoretical Preliminaries

It will be useful here to clarify a few basic concepts regarding structural rhythm that will be relevant to my analysis. Although the discourse on tonal rhythm is vast and complex, I will focus only on those aspects of the theoretical framework that pertain to the structural rhythm of this movement. Elaborating upon Morgan's definition cited above, I argue that the relative strength of a structural accent is determined by the shifting interaction between harmonic, contrapuntal, and rhythmic events. The strength of a

⁹⁹ This higher-level representation is additionally supported by the articulation of three wedges followed by a slur.

structural accent is greatest when the contrapuntal impulse completes its linear motion at the most stable harmonic and rhythmic point of arrival.

In terms of upbeat accents: the beginning accent of a *Ursatz*, for instance, opens with a relatively weaker structural accent in relation with the endpoint of the *Ursatz* since it is initiated from 3[^], a point of relative tension in relation to its contrapuntal goal, 1[^]. Since a weaker structural accent relates to a stronger accent in an upbeat-to-downbeat rhythmic relationship, a *Ursatz* in abstraction could be said to take on this very structural rhythmic shape. It could be then said that structural upbeats are structural accents that call for continuation due to their intrinsic instability. A structural upbeat generates expectancy for the onset of a stronger point of arrival that will serve as its downbeat pair. It should be noted here (a point that will be relevant for the following analysis) that a structural downbeat accent can be succeeded later by a yet stronger accent at a higher level, retroactively converting the previous downbeat accent into an upbeat. As such, it is necessary for the analytic perspective to be sensitive to the temporal spans and contexts from which interpretive statements are rendered.

Let us here consider two bass lines in abstraction that model rhythmic and temporal contexts related to Haydn's movement. **Example 3.2a** shows a stepwise descending tetrachord from 4[^] to 1[^] with a standard "rule of the octave" harmonization. The example aligns its structural rhythmic implications (inherent in the harmonization) with a standard metrical accentuation. The weak beats (beats 2 and 4) align with the two dissonant 7th chords, while the strong beats (beats 1 and 3) pair up with the consonant

triads. **Example 3.2b** shows a first level reduction of this bass line (without additional musical context), in which an accentual pattern of “weak-strong-weak-stronger” emerges. The second downbeat accent (denoted by +++) is the stronger of the two because it constitutes the most stable point of arrival marked by a 5/3 chord (as well as occurring on a metrical downbeat).

Example 3.2a could be alternatively reduced into the accentual pattern shown in **Example 3.2c**, where the initial three elements of the bass line form an overarching upbeat that subsumes the 6/3 chord of beat 3 into a local passing tone, moving collectively towards the structural downbeat across the barline. Yet without further musical context, the abstract bass line of **Example 3.2a** poses an “either/or” situation moving from the foreground to the middleground level.¹⁰⁰ **Example 3.2d** illustrates an alternative reading in which the higher level structural downbeat accent rests on the 6/3 chord while the 5/3 on the next downbeat is interpreted as a consonant skip (via a passing tone on 2[^]) that serves to extend the 6/3 in time. This reading might be possible when there are strong cues on the musical surface to suggest it. However, in this abstract environment it remains unconvincing.

Example 3.3a presents a second abstract bass line situation. Here the bass alternates twice between 1[^] and its stepwise upper neighbor, 2[^], without differentiation in terms of their harmonization and metrical placement. Because of its intrinsically symmetrical structure (and again a lack of further musical context), this bass line segment poses an indeterminable either/or scenario when reaching for the middleground level: both **Example 3.3c** and

¹⁰⁰ For more on this topic of tonal analysis, see Carl Schachter, “Either/Or,” in *Schenker Studies*, ed. Hedi Siegel, (Cambridge: Cambridge University Press, 1990), 165-79.

3.3d could be valid readings. The two contrasting bass line examples illustrate that it is the relation between the two downbeats that in great part determines the overall rhythmic trajectory of such abstract bass line fragments. When they are compositionally undifferentiated (as in **Example 3.3**), there is no necessary sense of forward motion toward a focal point, since both downbeats rest on an equal structural footing. In such instances, the music projects a sense of circularity, committing to no definite point or moment of closure. With a few notable exceptions,¹⁰¹ genuine large-scale formal and structural symmetries do not pervade late eighteenth-century tonal repertoire. As I shall demonstrate, Haydn crafts the first movement of Op. 64 No. 3 in such a way that it invites the listener and performer to engage with different temporal frames within the temporal continuum, and to continually (re)assess the ever-shifting dynamic between structural upbeats and downbeats.

3.4 First Group

I now explore the structural rhythms of the first movement of Op. 64 No. 3. The first group, mm. 1-17, divides into two parts, with the division marked by a caesura in m. 7. Mm. 1-5 constitute the first complete phrase unit of the first group, followed by a kind of musical afterthought or a “musical suffix” (mm. 6-7) that begins as though to initiate a parallel phrase. The second part of the first group begins at m. 8 marked by a different texture and thematic profile. As I shall demonstrate, Haydn charts out a larger rhythmic

¹⁰¹ A well-known example is Chopin’s A minor Mazurka, Op. 41 where the tonalities of E minor and A minor alternate on almost equal footing. See further comments in **Chapter Four**.

continuity in face of this clearly articulated bipartite design. The listener and performer are invited to reconsider the presentational function of the initial phrase (m. 1-5) at a later temporal perspective, retrospectively imparting hints of the expressive associations of developmental and transitional function.

Example 3.4 illustrates the voice-leading structure of the first five measures, reading it as a complete undivided *Ursatz* at the level of the phrase: the contrapuntal motion begins with 3^\wedge over I, moves through to 2^\wedge over V, and finally arrives at 1^\wedge over I, completing the linear and harmonic motion at the downbeat of m. 5.¹⁰² Without further musical context at the current temporal perspective, 3^\wedge is heard for now as the *Kopftón*. Since 3^\wedge /I is a weaker structural articulation in relation with a closing structural accent ending with 1^\wedge /I, the off-beat initiation of this opening accent (beginning metrically midway in the upbeat measure) further characterizes its upbeat relationship with the closing accent of m. 5. **Example 3.4** shows the underlying rhythmic trajectory of the phrase.

Once closure is achieved on the downbeat of m. 5, a new phrase seemingly reinitiates with the music of m. 1 (including the upbeat figure). The feigned gesture towards a consequent phrase re-beginning on 3^\wedge /I seems to overturn the harmonic and contrapuntal closure at m. 5. However, this fails almost as soon as it begins. The newly revived initiatory impulse fizzles out after just one bar, leaving 3^\wedge dangling in midair without local bass support at

¹⁰² I thank Frank Samarotto for suggesting to me that one way to read the inner voice descent from 3^\wedge to 2^\wedge is to read it as a lower-level interruption analogous to Schenker's graphic analysis of the opening phrase of Beethoven Op. 26/i in Heinrich Schenker, *Free Composition* trans. Ernst Oster (New York: Longman, 1979), Fig. 85. My reading preserves the uninterrupted linear descent across the phrase from 3^\wedge to 1^\wedge while articulating the allusion to a half-cadence in m. 2.

m. 7. What was ostensibly going to be a consequent restatement of the first phrase now becomes an open-ended musical suffix that hurls its tonal momentum into empty space. **Example 3.5** represents the voice leading structure of the suffix in relation to mm. 1-5. The example shows the prolongation of 3[^] from the *Kopfton* through octave coupling and left disconnected midway.¹⁰³

In terms of structural rhythm, the re-beginning on 3[^] creates a second upbeat accent that searches for a second downbeat arrival that would become its downbeat pair. The suffix is so tightly welded to the end of the tonal completion at m. 5 that its open-endedness creates a foreground rhythmic pattern by m. 7 of weak-strong-weak. **Example 3.6a** illustrates the structural rhythm from mm. 1-7; it aims to capture the uncertainty, at this temporal perspective, of how the music might unfold after m. 7. **Examples 3.6b** and **3.6c** offer two possible scenarios for “normal” continuation after m. 5. As **Example 3.6b** shows, the music after the downbeat arrival of m. 5 could prolong 1[^]/I through a short codetta-like passage eliciting no additional structural downbeat. The second possibility for continuation, as shown in **Example 3.6c**, fulfills what the re-initiation at mm. 5-6 seems to suggest: complete a consequent phrase ending with an authentic cadence. In this alternative, a second, equally strong structural downbeat would emerge, parallel to the downbeat of m. 5. This hypothetical accent might then be symmetrically undifferentiated from the first structural downbeat at m. 5, making it difficult

¹⁰³ Note the echo between the abrupt skip up to the high D of m. 3 and of m. 6.

to reach for a higher-level reading. (The scenario would be analogous to the abstract schema of **Example 3.3**, where there is an indeterminate forked path.)

Haydn opts for neither option. Instead, he introduces a new thematic unit in m. 8 with a (similarly) comic, “galloping” topic. The surface elements of the music at m. 8 forestall obvious logical connections with the preceding music; it is not until m. 10 and following that the tonal and rhythmic structure for the first group as a whole begins to take shape. After 2 “empty” bars (mm. 8-9) that initiate a local upbeat outlining the first two notes of a triadic ascent (Bb-D), the first violin from mm. 10-17 presents for the first time a complete, stable thematic statement from 5[^]. This thematic statement traverses a descending 5[^]-line through what will be the only regular eight-bar period of the entire movement. The phrase has all the trappings of a textbook period: a HC at m. 13 marking the antecedent and a PAC in m. 17 marking the consequent. Accordingly, the “galloping” theme is presentational in its formal function. Owing to its self-contained thematic and tonal regularity, it is devoid of developmental or transitional properties, and contrasts sharply with the unusual phrase-rhythmic design of mm. 1-7. The “galloping” theme’s firm beginning on 5[^] establishes 5[^] as the *Kopfton* for the first group, and as I shall argue, for the movement as a whole.

Example 3.7 illustrates the tonal and rhythmic structure of the first group. The onset of the *Kopfton* at m. 10 retrospectively clarifies the structural (although not necessarily formal) role of mm. 1-7. In this broader temporal perspective, 3[^] is now heard not as the *Kopfton*, but as the beginning of an ascending linear motion that moves toward 5[^] at m. 10. Measure 10

simultaneously marks the coming together of three structural events: 1. the completion of the *Anstieg*, 2. the (delayed) appearance of the movement's *Kopfton* and hence the beginning of the *Urlinie*, and 3. the beginning of the first *Ursatz* replica from the *Kopfton* itself. In this reading, the structural accent at m. 10 constitutes the first structural accent on the background level as an opening upbeat accent for the movement as a whole. As such, it overturns the first structural downbeat arrival at m. 5, despite being an upbeat of the middleground period (mm. 10-17).¹⁰⁴ **Example 3.7a** illustrates the structural rhythm of mm. 1-10 as a succession of weak-strong-weak-*stronger*, while **Example 3.7b** further reduces the first three accents at a higher level as one larger structural upbeat that finds its downbeat pair at m. 10.

The first group's sequence of structural rhythmic motions (as shown in **Example 3.7**) shares important aspects with the bowing gestures of the principal motive. These shared aspects, I argue, are made possible by the common aspectual shapes of their respective intentionalistic representations: the "up-down-up-down" aspectual shape of the bowing action is in this case isomorphic with the "up-down-up-down" aspectual shape of the structural rhythm. This relation is enabled by the shared "weak-strong-weak-*stronger*" feature that underlies the representations of both domains. Through the faculty of intentionality, such cross-domain associations allow for the abstract notions of structural upbeats and downbeats to gain concrete meanings when

¹⁰⁴ It is important to note here again that my analysis concerns Haydn's innovative structural rhythmic designs for the opening articulations of the primary formal sections of this movement (i.e. first group exposition, second group exposition, and recapitulation). Therefore, heard from vantage point of the first group alone (mm. 1-17), the structural accent at m. 10 would become an upbeat accent, with the closing downbeat accent at m. 17 being its stronger, downbeat pair.

related to actual musical actions (in this case, the representations of up-bow and down-bow gestures). The intentionalistic representations of bowing gestures animate the otherwise metaphorical senses of structural rhythm, lending real-life context to the internal dynamics of the structural rhythmic succession. In what follows, I will argue that similar progressions of structural rhythm recur at two other formal junctions as well as operating at the background level across the entire movement.

3.5 Transition and Second Group

The formal design of the second group conforms to what James Hepokoski and Warren Darcy term the “Tri-Modular-Block” (TMB).¹⁰⁵ By their definition, the TMB presents a double approach to the new tonic. This formal design poses a forked road in the analytical path, an either/or situation that requires resolution at a higher-level. In tonal terms, the fork involves hearing one of the two transitional dominants as part of the deep middleground. Of immediate note is Haydn’s unconventional construction of the dominant in the first transition. After a transitional passage that leads through a series of descending parallel 6/3 chords (mm. 23-27), the transitional dominant sneaks in on a 6/5 chord in m. 28 as the ending point of a stepwise-descending inner voice. The transitional dominant thus initiates with a bass tone that is problematically constructed. It is established rhetorically as falling on a half

¹⁰⁵ See James Hepokoski and Warren Darcy, *Elements of Sonata Theory: Norms, Types, and Deformations in the Late-Eighteenth-Century Sonata* (New York: Oxford University Press, 2006), 170-79.

cadence, yet it is articulated with an unconventional “6/5-like” sonority with the viola articulating the bass tone. Moreover, after the “real” bass tone enters in the next measure on 5[^], the dominant plateau surprisingly evaporates in terms of surface energy. It is significant here that the downbeat of m. 32 is not marked with *fz*—the expressive effect here relates to that of mm. 6-7 where there was similarly an evaporation of surface energy. The end of the transitional unit (mm. 29-32) reverses conventional dynamic and gestural expectations of a transition. And as I shall point out later, when the same music returns on the dominant of the home key in the recapitulation (mm. 150-152), Haydn normalizes this rhetorical feature, allowing the dominant plateau in the recapitulation to fulfill its conventional rhetorical function—that that of heightening the articulation at the onset of the second group—with expected force and emphasis. By avoiding a conventional presentation of the transitional dominant in the exposition, Haydn heightens the intensity of the transitional dominant in the recapitulation relative to the exposition. The dominant that prepares for the onset of the second group in the recapitulation (m. 153), as I shall argue below, constitutes the most significant structural downbeat articulation of the movement at the background level.

Returning to the exposition: the manner with which the second dominant plateau is achieved (m. 42) makes more apparent, in retrospect, the disruptive aspects of the first transitional dominant: an emphatic (and conventional) German augmented 6th chord. Moreover, the principal motive returns to accompany the second dominant. These features help establish the latter dominant as structurally more significant. By extension, this hearing

assigns the second tonic arrival at m. 48 as the stronger downbeat accent relative to the first tonic downbeat at m. 33; the two dominants on either side of the TMB as a result connect with one another at the middleground level. The lyrical theme at m. 33, which does not continue as a tonally self-enclosed harmonic and contrapuntal unit, bleeds seamlessly into the second dominant at the consequent branch of its projected form. **Example 3.8** shows a bass line reduction of the “Tri-Modular-Block” and its structural rhythm in the temporal perspective of mm. 28-48. The example shows that the structural rhythmic shape of the TMB parallels that of the first group; both embody the rhythmic pattern that reflect the bowing actions of the opening motive.¹⁰⁶

3.6 Recapitulation and Overall Form

Sonata forms with the so-called “double return” typically initiate a strong background downbeat at the onset of the recapitulation. As the central articulative event of the form, the recapitulatory moment resolves the tension of the retransitional dominant. As I shall argue, however, the rhythmic articulation at the recapitulatory junction of Op. 64 No. 3 complicates the standard narrative. The return of the first phrase of the movement (mm. 125-130) in several ways compromises the sense of a full structural re-beginning since. For one, the upbeat character of the opening phrase’s structural rhythm

¹⁰⁶ I should note that my reading of the structural rhythm does not dismiss the notion that m. 33 initiates the second group. Measure 33 signals hallmarks of a contrasting material. Moreover, the music that resumes after the second dominant plateau (m. 48) makes for a logical thematic and topical continuation to the lyrical first part. Rhetorically, m. 48 begins a concerto-style derived virtuosic display episode, which typically follows subordinate themes of a lyrical nature.

(as I have discussed) heightens expectations for the return of 5[^] as *Kopfton*. As I will demonstrate, Haydn re-imagines the approach to the headtone by withholding the headtone's re-appearance until the onset of the second group. I will show that the structural rhythmic processes that had earlier underpinned the first and second groups of the exposition here stretch across from the beginning of the recapitulation to the second group. The design brings the two formal units into tighter relation with each other and makes the onset of the second group into a background structural downbeat.

After a PAC in the submediant in m. 120, the music proceeds directly into the return of the opening phrase with no harmonic mediation. An unharmonized D-Eb dyad in the first violin serves as a foreground connective tissue highlighting the common tone D between the harmonies vi and I. Harmonically unmediated moves from a strong submediant cadence late in the development to a return of the tonic at the recapitulation had occurred with frequency in mid-century works, though the practice had waned by the 1780s.¹⁰⁷ Commenting on the musical results of this practice, Hepokoski and Darcy write:

...when the development ends with the conventional vi:PAC (instead of the active dominant, V/vi) and proceeds with little or no significant mediation into the recapitulation...it can seem more elementary, cruder, than the normal practice, since

¹⁰⁷ For discussion of this and related practices in Haydn, see James Webster, *Haydn's "Farewell" Symphony and the Idea of Classical Style* (Cambridge: Cambridge University Press, 1991), 142-44.

it cuts out the need for bridging the submediant PAC to the tonic with an extended passage of retransition.¹⁰⁸

In the context of the 1780s, the procedure additionally harks back to outdated and more rigid tropes of Baroque Da Capo aria practice, which often close the middle section with a cadence in a related minor mode key and proceed back to the first section without an intermediary dominant. Whatever the procedure's historical precedents, Haydn's decision—both within the context of his personal compositional proclivities and the broader practices in the 1770s and 1780s—to move from a firm PAC in the submediant to the tonic without any hint of a dominant mediation at the recapitulatory junction is unusual in the context of late-eighteenth century sonata practice.¹⁰⁹ The fact sheds a significant light on the interpretation of structural rhythm at this moment of the form, and specifically the rhythmic status of the tonic articulation. With this unusual retransitional strategy, Haydn weakens the structural status of the primary theme at its return: the two shared common tones between vi and I cushion the impact of the tonic's return more than either a dominant or V/vi (another, more common, late eighteenth-century strategy; both share only one common tone with the tonic). The structural status of the recapitulation is further undercut by its subsequent continuation, which transforms the original musical "suffix" of m. 5-7 into a large-scale dominant prolongation that functions both as the "missing" retransitional

¹⁰⁸ Hepokoski and Darcy, *Elements of Sonata Theory*, 203; See also Charles Rosen, *Sonata Forms* (New York: W. W. Norton, 1988), 262-272.

¹⁰⁹ Ibid., Hepokoski and Darcy cite examples from Mozart's earliest violin sonatas as following the same procedure and no others from the late century.

dominant and the transitional dominant to the second group. This dominant span, mm. 132-152, recaptures the background 5[^]/V from the second group of the exposition and participates in the background level of the structure.

Example 3.9 provides an overview of the voice leading and rhythmic structure of the movement. In terms of voice leading, the sketch depicts the movement as an unorthodox one-part, undivided structure. Owing to the lack of a structural dominant at the end of the development, I read the first structural dominant as connecting the exposition's second group with the (now retransitional) dominant in the recapitulation. This connection pushes the rhythmic articulation of the tonic at the recapitulation to the status of a foreground level downbeat in relation to the tonic downbeat at m. 153. The "large-scale dissonance," which typically finds resolution at the beginning of the recapitulation, here finds resolution instead at the onset of the second group. The reading therefore marks the return of the second group at m. 153 as the most significant structural downbeat of the movement, where the structural descent of the *Urlinie* begins.¹¹⁰

Example 3.9 additionally illustrates the deep-middleground structural rhythm of the movement: as I argue, the movement expresses yet one more

¹¹⁰ Haydn subtly re-composes the melodic structure of mm. 153-166 (in relation with its corresponding passage in the exposition, mm. 52-65) to feature a clear 5[^]-line descent from F. As **Example 3.9** shows, I read the upper voice structure of mm. 52-65 as a 3[^]-line and mm. 153-166 as a 5[^]-line. I wish to show that this "inconsistency" stems from Haydn's subtle tweaking of the same thematic material upon its return and that it contributes to the greater structural weight projected by the second statement, bearing the background structural descent of the movement. Of note too are the four upbeat bars, mm. 48-51 (which Hepokoski describes as "static 'warm-up'" bars) which resolve the transitional dominant, but which serve as an upbeat to the thematic initiation at m. 52. See Hepokoski, "Beyond the Sonata Principle," *Journal of the American Musicological Society* 55/1 (2002): 124. In the recapitulation, these upbeat measures are omitted, leading directly to the thematic presentation at m. 153. The omission of these "warm-up" bars heightens the articulative strength of m. 153.

statement of the upbeat-downbeat-upbeat-*downbeat* rhythmic pattern. The attenuated articulation of the tonal and thematic return at m. 125 marks the first (weaker) downbeat while the onset of the second group marks the second and stronger downbeat arrival. In this way, the recapitulation can be seen to amplify the structural rhythmic tendencies of the exposition.¹¹¹

As I have argued earlier, one way to understand the energy flow of the conceptual structural rhythm is to understand it in relation to the aspectual shapes that underlie local musical actions such as the bowing actions that pervade the surface of the movement. This relation, enabled by the faculties of intentionality, concretizes the abstract domain of structural rhythm, lending real-life senses to its metaphorical notions of *upbeat* and *downbeat*. When mapped onto the principal formal articulations of the movement, the internal logic that underpin representations of the bowing gesture help to precisely define and attribute relationships among these formal articulations.

3.7 Historical Implications

Broadly speaking, the nineteenth century saw an aesthetic shift in favor of continuous development over symmetry. A frequent concern for composers of the Romantic generation was to revitalize the inherently repetitive structure of the sonata recapitulation while working within its classically derived framework. This attitude contrasts with eighteenth-century conceptions of the

¹¹¹ In this sense I disagree with Hepokoski's view (in "Beyond the Sonata Principle") that the recapitulation normalizes the expansive features of the exposition. Rather, I see the tightening to be part of the recapitulation's intensification of the tonal and rhythmic processes.

form as one primarily characterized by cadences and their articulations. Rosen points out that “discontinuities are, indeed, the principal preoccupation of the late eighteenth-century theorists – Quantz, Vogler, Koch, etc; what concerns them most is the character and the placing of cadence and half-cadence within any musical form.”¹¹² From a nineteenth-century perspective, the recapitulation was regarded as the least tonally dynamic part of the form. Yet for the late eighteenth-century composer this feature was not always a cause for concern. The senses of symmetry and balance afforded by the repetitive structure of the recapitulation very often constitute positive aesthetic values for the classical composer.

In structural rhythmic terms, the specific cause for unease for the Romantic generation might be said to be the overabundance of tonic downbeat articulations within the recapitulatory space, especially when contrasted with the other parts of the form. The cycling of all or nearly all of the important materials in the tonic results in a formal space that is largely tonally static. The current understanding of these issues is that beginning roughly with Beethoven and continuing through to the late nineteenth century, composers consistently aimed to invigorate the tonal dynamic of the recapitulation with ever more continuous tonal structures. One common strategy is to delay and/or reduce the number of expected tonic downbeat articulations. The result would often recast music that was originally presentational in function into music characterized by transitional and developmental features.

¹¹² Rosen, *Sonata Forms*, p. 25.

While it is often thought that the aesthetic preference for continuous development is mostly associated with nineteenth-century musical practices, the analysis here has tacitly argued that similar proclivities likewise appear in late eighteenth-century contexts even when they are motivated by different concerns resulting in different aesthetic outcomes. My analysis has explored how Haydn in Op. 64 No. 3 achieves a specific balance within the continuum of articulation and continuity, especially in the domain of structural rhythm. As I have shown, he crafts the rhythmic initiation of each of the three principal formal junctions (beginning, second group, and recapitulation) in ways that explore different versions of a very specific underlying rhythmic shape. By delaying two-fold the expected initiatory downbeat in each of the three formal junctions, their imminent arrivals are rendered all the more dynamic.

In thinking about the relationship between musical action and musical meaning in this work, the analysis has aimed to animate the movement's expressivity within the guiding physical gestures that saturate the musical surface and deeper levels of its rhythmic structure. I hope to have shown that the movement exhibits an extraordinary marriage between different domains of the music and their individual senses of rhythm.

CHAPTER FOUR

TEMPO AND PROCESSUAL FORM IN SCHUBERT'S PIANO SONATA, OP. 42¹¹³

4.1 Introduction

In her recent monograph *In the Process of Becoming: Analytic and Philosophical Perspectives on Form in Early Nineteenth-Century Music*, Janet Schmalfeldt writes:

If indeed a “theory of early nineteenth-century form” can one day be produced, I only argue here that one of its principal tenets must be the idea of *processual approaches to form...*¹¹⁴ (my emphasis)

To be sure, nineteenth-century instrumental works (whilst acknowledging their eighteenth-century precedents) frequently invoke a processual quality in their formal unfolding: *Formung* (form-as-process) as contrasted with *Form* (form-as-shape).¹¹⁵ Yet processuality—or the sense of *becoming*—remains, as Schmalfeldt acknowledges, a metaphor when applied to an analytic category

¹¹³ An earlier version of this chapter appeared as: “A Response to Schmalfeldt’s ‘Form as Process of Becoming’: Once More on the Performance and Analysis of Schubert’s Sonata in A minor, Op. 42,” *Music Theory Online* 16/2 (2010).

¹¹⁴ Janet Schmalfeldt, *In the Process of Becoming: Analytic and Philosophical Perspectives on Form in Early Nineteenth-Century Music* (New York: Oxford University Press, 2011), 15.

¹¹⁵ Kurt Westphal, *Der Begriff der musikalischen Form in der Wiener Klassik: Versuch einer Grundlegung der Theorie der musikalischen Formung* (Leipzig: Breitkopf & Härtel, 1935). For recent mentions of Westphal’s notions, see James Webster, “*Formenlehre* in Theory and Practice,” in *Musical Form, Forms & Formenlehre: Three Methodological Reflections*, ed. Pieter Bergé (Leuven: Leuven University Press), 123–24.

as conceptually-based as musical form.¹¹⁶ Edward Cone, for instance, when formulating analogous distinctions to that between *Form* and *Formung*, evokes the more concrete intentionalistic activities of “synoptic comprehension” on the one hand and “immediate apprehension” on the other as the active ways with which the perceiving agent engages with formal concepts.¹¹⁷ Cone’s framing appends a psychological, intentionalistic context—namely that of perception—to the understanding of the formal concepts.¹¹⁸

In this chapter, I will explore how the intentionalities of performative actions, specifically the performer’s deployment of contrasting tempi, articulate an alternative sense of formal processuality in the first movement of Schubert’s Piano Sonata in A minor, Op. 42, one that complements Schmalfeldt’s processual reading of the movement.¹¹⁹

¹¹⁶ Schmalfeldt explicitly acknowledges the metaphorical ontology of notions such as “process” and “becoming” when applied to musical form. She writes: “I arrived at the central metaphor of this study—the concept of *becoming*—long before I came to realize its role within German Romanticist and idealist thought.” Examples of other, less direct references to these notions as metaphors by Schmalfeldt are: “The metaphor that emerges so emphatically here [in reference to Dahlhaus’s discussions of Beethoven’s “*Tempest*” sonata] is the image of form coming into being, the notion of *becoming*...”; “In its nontechnical sense, the notion of becoming has itself become a pervasive, albeit vague, metaphor for the effect of all music perceived phenomenologically as a temporal art.” See Schmalfeldt, *In the Process of Becoming* (2011), 8-10.

¹¹⁷ Edward T. Cone, *Musical Form and Musical Performance* (New York: Norton, 1968), 89.

¹¹⁸ Ibid., 88-98. See also Webster, “*Formenlehre* in Theory and Practice,” 124.

¹¹⁹ Schmalfeldt’s most detailed discussions of this movement can be found in: “On Performance, Analysis, and Schubert,” *Per Musi: Revista Acadêmica de Música* 5-6 (2002): 38-54 and “On Performance, Analysis, and Schubert,” in *In the Process of Becoming: Analytic and Philosophical Perspectives on Form in Early Nineteenth-Century Music* (2011): 113-131. Though Schmalfeldt’s writings pay important attention to the role of the performer and performance, much like the remainder of her book, the intentionalistic focus is largely grounded in perception. Discussions of performance frequently are evoked in terms of what the performer does to lend the listener one set of impressions over another rather than developing musical implications from the performative actions themselves.

4.2 Tempo and Musical Form

In terms of the all-important performance parameter of tempo choice, there has always been much debate amongst performers over whether a chosen tempo is to be strictly maintained throughout a movement or work. For the late twentieth- and twenty-first-century musician, the acceptance of unity and coherence as core aesthetic values for Western art music runs deep. The “one-tempo-only” rule of thumb is frequently taught owing to the prevalent belief that a constant tempo ensures the integrity of a composition’s formal and structural unity, and that the work would “fall apart” if disparate tempi were applied. This position has been held by many eminent musicians, not least Rudolf Serkin, who claims that: “For any music, the pulse should remain unified... In the *Appassionata* or the *Waldstein* Sonatas, I think a tempo that is not unified is a crime.”¹²⁰

Echoing the central theme of this dissertation, musicians such as Serkin intuitively sense that there is an important relation between tempo choice, as a domain of performative action, and a composition’s conceptual sense of form and structure. Yet for works that invite a processual hearing of form, such constraining of a performance parameter as central as tempo choice, I argue, blocks access to their processual nature. In other words, if we understand the metaphor of processuality as implying that something becomes or is transformed into something else at a later point in time, then tempo would be a concrete parameter through which such senses of processuality could be

¹²⁰ Dean Elder, “Serkin, As Interviewed by Dean Elder,” *Clavier: A Magazine for Pianists and Organists*, (November, 1970): 15.

made manifest.

In what follows, I will: 1. briefly recapitulate Schmalfeldt's interpretation of the exposition's "processes of becoming" as a foil from which to explore an alternative (but related) set of formal processes involving the unfolding of the movement's two principal thematic materials, and 2. suggest how these alternative formal processes relate intimately with evidence of the movement's shifting topography in terms of tempo, the latter deriving from late eighteenth-century notions of tempo and meter. I argue that differences in the metrical profiles of thematic materials point to differences in their tempo during performance. The intentional actions that give rise to those tempo changes constitute the representational content of the first level of intentionality (CS₁); its conditions of satisfaction in turn "color" the movement's large-scale formal processes, the contents of the second level intentionality (CS₂).

4.3 Formal Processes

Example 4.1 attempts to capture in my own terms the type of "form as process" in Schmalfeldt's analysis. She forges historical and conceptual ties between Schubert's sonata and Beethoven's "Tempest" Sonata, a work which she argues served as the principal compositional model for Schubert's Op.

42.¹²¹ The processual nature of these works requires that listeners, as

¹²¹ For Schmalfeldt's interpretation of Beethoven's "Tempest," see: Schmalfeldt, "Form as the Process of Becoming: The Beethoven-Hegelian Tradition and the 'Tempest' Sonata," in *Beethoven Forum* 4 ed. Christopher Reynolds (1995): 37-71.

Schmalfeldt eloquently describes, listen “backwards as well as in the moment—by *remembering* what they have heard, while retrospectively reinterpreting formal functions in the light of an awareness of the interplay between conventions and transformations.”¹²² In **Example 4.1** I aim to graphically capture both the idea of “form coming into being” as well as the particular mode of listening this type of formal process demands. As a complement to Schmalfeldt’s own graphic representation of these processes,¹²³ **Example 4.1** additionally conveys how **Structural Domains**—such as tonal structure, thematic design, topical reference—combine (multivalently)¹²⁴ in *rhythmic* dialogue to engender our perception of **Formal Functions** and their hierarchies. I will return later to the bottom of the example, which shows the domains of meter and tempo.

The phrase structure of the opening paragraph leading up to m. 26 inflects a highly unusual and dramatically reinterpreted Classical sentence. Most immediately discernible is the expansiveness of Schubert’s material. When the basic idea (mm. 1-4) is sequentially repeated (mm. 5-10), it undergoes a process of expansion that extends it from four measures to six measures, ending on the downbeat of m. 10. As a result, the highly expanded “fantasie-like” cadential buildup from mm. 10–21 seems not only logical but necessary to counterbalance the expanded and improvisatory nature of the opening presentation. To further render his main theme processual as opposed to expository, Schubert shapes the tonal underpinning of mm. 1-25 in

¹²² Schmalfeldt, *In the Process of Becoming*, 116.

¹²³ Ibid., 119.

¹²⁴ For a description and demonstration of analytic “multivalence,” see Webster, “*Formenlehre* in Theory and Practice,” 128ff.

ways that obscure a clear presentation of the background tonic. As the bassline reduction in **Example 4.1** shows, the dominant takes deep middleground control from the very outset and continues to do so for the entire presentation phase between mm. 1-10.¹²⁵ The opening theme's expansiveness, developmental features, and almost C. P. E. Bach-like hesitant expressive qualities combine to imbue it with a "loose-knit" formal expression frequently found in transitional(-like) regions of the form.

In contrast with Schmalfeldt's analysis, I argue that it is not until m. 26 that the music initiates a background structural tonic downbeat.¹²⁶ It is at this point that we retrospectively hear the opening theme as simultaneously taking on the formal and expressive qualities of a slow introduction while maintaining its original status as a main theme.¹²⁷ The retrospective hearing of the opening theme uncovers a sense of multiplicity that seems to emanate from the musical materials themselves. The line is blurred between model and variant, statement and development. As a result, a tension exists between the built-in necessity of the musical materials to engage in processual

¹²⁵ Here I depart from Schmalfeldt's interpretation: Schmalfeldt hears the opening gesture (mm. 1-2) as underpinned by the tonic, whereas I hear it as suggestive of a dominant 6/4 sonority with E (5[^]) as the controlling bass tone. My hearing is more dependent upon relating, both aurally as well as physically (contingent on retaining the same fingering for both m. 1 and m. 5), the upper voice motion between E (5[^]) of m. 1 with F (6[^]) of m. 5 *on the same structural level*. This connection is not possible when reading the top voice E of m. 1 as part of an initiatory (background) tonic.

¹²⁶ Schmalfeldt interprets the opening theme as beginning with a tonic background. See her comments on this feature of the opening theme in "Response to Lee," *Music Theory Online* 16/2 (2010).

¹²⁷ Schmalfeldt hears the opening first as a slow introduction, then retrospectively as a main theme. In situations involving delayed downbeats, I believe it is more logical for formal units *prior* to the structural downbeat to take on the additional functional associations of units that typically would *precede* them under a normal formal syntax. It is for this reason that I hear the structural downbeat of m. 26 as providing retrospective confirmation that the opening material takes on the additional dimension of a slow introduction as opposed to hearing it first as a slow introduction that then becomes a main theme.

development and the formal shell of the classical sentence that encages the material's inner developmental urges. It is as if the music were trying to force itself out of its expository formal shell, resulting in a stretched and deformed sentence phrase.

The disruptive aspects of the opening theme's non-tonic opening combined with immediate motivic development together characterize its latent musical tendency. These tendencies for motivic development and tonal disruption, as I will show, continue to realize themselves across the opening theme's various reappearances throughout the movement. I argue that with each subsequent reappearance at a different formal location, the opening thematic material consistently and progressively realizes its latent expressive and structural tendencies. The result is the formation of hitherto unnoted formal processes that cut across those identified by Schmalfeldt, who principally considers transformations of formal functions in terms of adjacent (as opposed to non-adjacent) formal units. As I shall argue, each of the movement's two thematic materials engages in non-adjacent, long-range processes of becoming that cut across linear formal boundaries and voice leading spans.

In terms of the contrasting thematic material and its formal processes: a militaristic march-like idea that contrasts vividly with the hesitant and floating character of the opening theme enters with the tonic structural downbeat at m. 26. I argue that the formal processes of the march theme, occurring across its own different (re)appearances through the movement, *reverse* those displayed by the opening theme. The structural tendencies of this

theme at m. 26 are marked by tonal stability and an almost mechanical regularity of harmonic rhythm, articulation, and dynamics. While these qualities are theoretically well-suited for expository functions, the march theme is instead made to *become* the transition. In contrast with the opening theme (whose developmental urges seem to come from within the materials themselves), the march theme between mm. 26-39 seems to be subjected to tonal and phrase-rhythmic developments from without, to accommodate the urgency of transitional function. Measure 26 therefore embodies at once the triple functional responsibilities of 1. a structural beginning, 2. a subordinate theme, and 3. a genuine transition.

The subordinate theme “proper” can be heard to initiate at m. 40 in the mediant. The developmental impulse from the “transition” seems to seep across into the subordinate theme space (literally, as the musical surface leads seamlessly into m. 40). The subordinate theme consists of three distinct internal sets of variations based on the march material. Relative to the transition, the subordinate theme is, at least initially, “tightly-knit” in terms of its phrase structure. The variations are imposed on two clearly identifiable antecedent-like phrases (mm. 40-50 and mm. 51-61), each closing with a half cadence with the second phrase ending with a more expanded half cadence (mm. 61-62) than the first. The third variation appears as part of the closing space (mm. 77-89).

In contrast to the opening theme, the overall trajectory of the march theme is one that incrementally heads toward regularization. The latent musical tendency of the march material is one marked by tonal solidity and

rhythmic regularity. As I have argued, Schubert fulfills its tendency by progressively casting each subsequent varied appearance of the march theme into more and more stable formal contexts. The bottom half of **Example 4.2** summarizes the formal trajectory of the march material in the exposition: 1. it first appears within an overall transitional formal context, 2. then as distinct variations in the more stable subordinate theme space, and finally 3. in the closing space as a means to anchor the new tonality.¹²⁸ As the example shows, the formal trajectory of the march theme does not stand alone: it is counterpointed by that of the opening material. **Example 4.2** shows the two thematic strands coexisting in interlocking and contrapuntal fashion, coming together to engender a set of complementary formal processes in addition to those described by Schmalfeldt.

Returning again to the thread of the opening material: the opening theme makes its first reappearance in C minor in the heart of the subordinate group (m. 63). Its reappearance disrupts what could have been a logical harmonic (as well as phrasal) connection between the dominant at the end of the second antecedent phrase (m. 61) and the tonic at the onset of the closing section (m. 77). Owing to its tonal and formal features, the opening material upon its return at m. 63 functions as a kind of parenthetical interpolation.

Despite the momentary cadence on a root position C minor triad in m. 71, I

¹²⁸ I should acknowledge that the closing space (mm. 77-90) is not devoid of destabilizing features. There is a marked return of the opening material in mm. 82-83 and in mm. 85-86 which bring back implications of A minor. The second destabilizing feature involves the rhetorical framing of the half cadence on which the closing concludes. These features return and culminate in the coda of the movement, which participates in the kinds of formal processes discussed in this chapter but which will be discussed in a separate study on the intersection between form and Schubert's compositional/performance practice with regards to octaves in piano writing.

argue that the pitch-structural status of C minor amounts to a kind of “horizon tonality,” one that does not receive deep-middleground affirmation.¹²⁹ An appreciation of the expressive character of this C-minor passage, I argue, is in part contingent upon sensing that the initial promise for C minor to materialize as a middleground tonality is *not* kept. The bassline sketch in **Example 4.1** depicts my hearing, in which the passage between mm. 63-66 is subsumed under a single dominant prolongation, framed as a large-scale cadential (dominant) expansion.

The return of the opening material as a parenthetical interpolation in C minor constitutes the first in a series of stages through which, I argue, Schubert releases the structural (in this case, developmental) tendencies of his opening theme. In the subordinate theme space, Schubert accomplishes this in part by making overt the dominant tendencies of the theme with a literal bass pedal on 5[^] in m. 66 and 70; its dissonant status is made more pronounced by being cast in the minor mode within a larger prolongation on (major) III. As the movement unfolds, the opening theme with its inherent disruptive tendencies gradually finds appropriate formal-functional contexts that more suitably accommodate its tendencies. The developmental proclivities of the

¹²⁹ A note on the “apparent tonic” of m. 71: although it may initially seem that the C-minor tonality (that enters with the reappearance of the main theme) at m. 64 “takes care” of the dominant of m. 61, I believe a stronger case could be made that its initial status is illusory. The bass motion for mm. 65–70 remains on the same G from m. 61, pointing to the presence and continuation of dominant function. The temporary tonic resolution of this dominant at m. 71, I argue, should be understood retrospectively as an “apparent tonic” based on the relatively “light” articulation of C in the bass at a weak (tenor) range of the piano register. The continuation (mm. 72–74) then immediately brings down the register and focuses on b6[^] of C in the bass to strengthen the cadential 6/4 at mm. 75–76. The strength of the cadential 6/4 articulation, as a consequent of both its low register and the manner of its approach, retroactively overrides the temporary root-position relief at m. 71, and ultimately connects with the dominant of m. 61 on the same structural level.

opening theme culminate at the recapitulation, the central articulative event of sonata form. I invite the reader to imagine that opening theme's penchant for tonal instability and formal disruption is let loose here in the recapitulatory junction, where it is set free in a contrapuntal tour-de-force. As **Example 4.3** shows, the bassline structure of the retransitional process (mm. 142-174) traverses a sequence of rising minor thirds, with each bassline station articulating a dominant and its implicit tonic horizon. The bassline sketch shows that the horizon tonality of C minor (mm. 156-169) proportionally exceeds the other bassline stations, and as such comes closest to materializing as a manifest key. This is a significant feature in terms of the overall formal trajectory of the opening theme: Schubert at this point in the form brings the two C-minor episodes (both based on the opening theme) into close relation with one another. The intensification of the C minor episode at the retransition retrospectively amplifies the latent tonal potentials of the former episode (in the subordinate theme space). The retransition is thus expressively so much more intense than the music of mm. 1-25 (the material from which it developed) that one is compelled to hear the arrival of the double return in m. 186 more as a transformed statement than a thematic return.

Example 4.2 summarizes my commentary on the movement's formal processuality until the recapitulatory overlap. The example aims to capture a facet of the movement's multiple formal processes, a facet that derives from the intersection of the two primary thematic materials. The top portion of **Example 4.2** summarizes the narrative trajectory of the opening theme (*Theme A*): it shows how the material becomes progressively more "adventurous" in

tonal context and correspondingly migrates toward formal positions that are increasingly “loose-knit” in formal function. The bottom portion counterpoints a reverse processual arch for the march-theme (*Theme B*). As each of the two thematic materials develops across the movement, the dialectical tension between content and form likewise progressively dissipate.

4.4 Aspects of Meter

Supporting the formal processes of **Example 4.2**, I argue, are the inherently contrasting metrical properties embodied by the two principal thematic materials. While the movement’s home meter is set in cut-time (coupled with the *Moderato* tempo-character indication), *Theme A* embodies expressive gestures that lie outside of what Schubert typically associates with cut-time meter in his compositional practice. For Schubert, movements set in cut-time almost always embody a clear rhythmic and accentual regularity at the half-bar level.¹³⁰ The highly “*empfindsam*” topic of *Theme A*, with its sharply disconnected gestures, seems to suggest an alternative metric profile in the context of Schubert’s notational practice. *Theme A*’s deviation from the “home” meter, I suggest, constitutes a kind of foreground metrical “dissonance” that creates expectations for resolution.

That the opening material seems to call for an alternative metrical description is further corroborated by a survey of first movements from Schubert’s symphonies that contain explicitly notated slow introductions.

¹³⁰ A relevant example in this context would be the first movement of Piano Sonata in D major, Op. 53 (D. 850).

Example 4.4 lists tempo and meter headings for the initial movements of all of Schubert's symphonies except for Nos. 5 and 7, the only symphonies that do not have explicitly notated slow introductions. Apart from Symphony No. 1 (composed when he was sixteen years old), all five subsequent symphonies feature the quarter-note as the principal beat unit for their slow introductions. Furthermore, in Symphonies Nos. 2, 6, and 8, the meter switches to cut-time at the onset of the Allegro. Thus not only did Schubert (at least in his symphonic output) prefer non-duple meters for slow introductions, it was a normal (if not invariable) compositional and notational practice to shift the metrical emphasis as the music moves out of the slow introduction into the ensuing Allegro.

Hearing *Theme A* alternatively in 4/4 meter, as informed by Schubert's symphonic music, sharpens the existing distinction between the respective expressive weights of the quarter-note value across the two themes. Moreover, the implicitly "dissonant" status of the 4/4 meter appropriately "colors" the dissonant tonal status of the non-tonic opening, generating expectations for resolution in both tonal and metric domains (accomplished by the structural downbeat at m. 26). In similar fashion, the return of the opening theme in C minor (at mm. 63-76) recalls the "dissonant" profile of 4/4 meter, adding to the sense of "otherness" that in part defines the expression of the parenthetical interpolation.

The march topic underlying *Theme B*, on the other hand, calls upon a clearly expressed accentuation pattern in performance. Aspects of the march theme—such as harmonic rhythm and texture—coalesce to suggest that its

quarter-note pulses are couched within a higher level half-bar tactus. Crucially, the (delayed) onset of the “home” meter at m. 26 coincides with the (likewise delayed) arrival of the structural tonic. In terms of how the 4/4 meter transitions to the home meter, I suggest that the arrival on the dominant at m. 10 marks the beginning of a move away from the 4/4 meter.¹³¹ Helped by the accompanying *crescendo* markings (in m. 11, 14, and 18), the “structural return” to cut-time solidifies in incremental fashion during these measures and can in fact be felt as in effect already prior to m. 26, though the march materials renders it firm and unambiguous. **Example 4.1** aims to capture the transition from 4/4 meter to cut-time between mm. 10-26 by showing cut-time symbols growing larger in the row titled “Projected Meter”. In the final stage of the metric transition (mm. 23–25), quarter-note rests and *fzs* markings at the half-note level establish the onset of the “home” meter at the structural downbeat through elision.

4.5 Tempo and Large-Scale Formal Processes

The movement’s unique network of formal processes and the kinds of metaphors (of processuality) that we attribute to them feature as the intentional contents of the second level intentionality (CS2). Before I explore

¹³¹ Of special interest here are the “fermata-like” gestures (either over rests, held chords, or improvisatory material) that consistently appear throughout the movement at formal junctions marking metric shifts. I suggest that they serve as a kind of “clearing of the palate” before the onset of a new meter, in order to facilitate changes in the underlying beat units. These fermata gestures (represented in **Example 4.1** as fermata symbols within quotations) momentarily suspend metrical underpinning, lending both listener and performer the needed (empty) space to make the transition from one meter to another.

how they relate to the first level of intentionality, the performative actions of tempo fluctuation, I wish to clarify first certain late eighteenth-century conventions regarding the relationship between meter and tempo. As Neal Zaslaw argues with regard to Mozart's tempo conventions: "for Mozart a piece in 3/8 with sixteenth-note motion predominating would have been faster than a piece in 3/4 with eighth-note motion, *if both had the same tempo indication*."¹³² This is a point for which Zaslaw finds further support when he cites instances when Mozart, together with his pupil Hummel, renote their compositions in an attempt to alter meter and tempo indications whilst keeping the actual performance tempo constant. I reproduce Zaslaw's Examples I and II¹³³ that illustrate this point here as **Example 4.5**.

I argue that Schubert, in principle, attends to Mozart's notational conventions when conveying tempo and meter relations. A case in point is the Symphony in C major, "The Great," which opens with *Andante* in 4/4 time which then leads into *Allegro, ma non troppo* in cut-time. We can infer from Schumann's well-known commentary on Schubert's symphony that the transition is intended to sound seamless in performance. It is this precise feature that so impressed Schumann, who in 1840 wrote: "Brilliantly novel, too, is the transition to the *Allegro*; we are aware of no change of tempo, but suddenly without knowing how, we have arrived."¹³⁴ In more precise terms, Schumann understood that Schubert had intended for the *half-note pulses* of

¹³² Neal Zaslaw, "Mozart's Tempo Conventions," in *International Musicological Society: Report of the Eleventh Congress of Copenhagen* ed. Henrik Glahn, Søren Sørensen, and Peter Ryom (Copenhagen, 1972): 721 (emphasis original).

¹³³ Ibid., 728.

¹³⁴ Robert Schumann, "Schubert's Symphony in C." in *The Musical World of Robert Schumann: A Selection from His Own Writings*, ed. and trans. Henry Pleasants (London: Macmillan, 1965): 166.

the *Allegro* 2/2 to sound at the same tempo as the *quarter-note pulses* of the *Andante* 4/4. If we draw on another (related) late eighteenth-century performance convention, namely that larger note values are executed more heavily and somewhat more slowly, then it becomes clear that the difference in tempo implied by the terms *Andante* and *Allegro, ma non troppo* serves to mitigate the difference between light and heavy execution implicit in the quarter- and half-note values of the symphony.

Returning to the Piano Sonata in A minor: once we imagine that the two thematic materials can oscillate between 2/2 and 4/4 meters, we can begin to envision how the metric oscillation might affect tempo choices for different formal units of the movement. Since the indication *Moderato* remains in effect throughout, in light of Schubert's tempo conventions that I have described, *quarter-notes* from 4/4 passages will move faster than the *half-notes* from passages in 2/2 time. Thus, if roughly 120 per quarter-note is appropriate for the opening theme, and if the transition to a heavier beat unit of half-notes *slows down* the tempo by roughly a margin of 20%, the tempo for passages in 2/2 time would fall roughly between 96–102 per half-note beat. The resulting tempo relations, I argue, suggest a shifting topography of tempi across the movement.

4.6 Intentionality of Action and Meaning

To return to the central theme of this dissertation: the shifting topography in the domain of performative action can be seen to relate to and

concretize the particular kinds of (conceptual) formal processes that I have been describing. This musical relation is enabled by the specific structures of intentionality that condition how we relate to the world more generally. The senses of formal processuality illustrated by **Example 4.2** remain metaphorical and otherwise dormant in performances that adhere to an unchanging tempo. Schubert's vision for the movement's formal processes, it seems to me, is conceived holistically; that is to say, the formal processes do not function independently of intentionalistic contexts such as action and perception. I argue that in the case of the A minor sonata, the performer's enactment of the tempo's shifting topography (as part of CS1) contributes integrally to the meanings associated with the formal processes (as part of CS2) that I have tried to articulate in the foregoing analysis.

I would like to now direct the reader to my recorded performance of the movement, accessible at:

<http://www.mikechengyulee.com/artist.php?view=media>

The performance is informed in part by the ideas presented in this chapter. However its inclusion here is not intended to be a didactic demonstration of the written analysis. I invite the reader to evaluate the artistic merits of the performance on its own terms as well as in light of the ideas presented here.¹³⁵

¹³⁵ The recording is of a live performance given at Cornell University in 2009 on a copy of a six-and-a-half-octave Viennese fortepiano by Rodney J. Regier (Freeport, Maine) modeled on a Conrad Graf piano from the late 1820s. For information about the piano, see: <http://www.rjregierfortepianos.com/6-octave-f.htm>

4.7 Performance and Analysis

In recent years a growing number of music theorists (and musicologists) have felt an urgent connection between their work and that of performers; both groups have been open to the mutual enrichments that these activities can offer. For the purposes of the performer, however, the perennial question has always remained: “How does knowing this help one perform any better?” Indeed, scholars do not always know how or whether one should “perform” analytical results, while performers, on the other hand, are often able to produce artistically valuable results that clearly do not seem to depend on articulate knowledge of the many structural features that are the music scholar’s bread and butter. Historically informed performers, additionally, are often well informed in terms of historical style and execution, yet have not always been attentive to a composition’s structural and formal underpinnings.

Beyond exploring the central themes of the dissertation, my broader goal in this chapter has been to participate in the performance-and-analysis dialogue by joining the dimension of performing style (informed by notions derived from historical performance practice) with a close reading of form and structure. In short, I have attempted to propose a mode of listening and performance that combines an awareness of both “style and idea,” forging a connection between the concerns of both analysts and performers with those of the composer.

In the first movement of Schubert’s A minor Sonata, the “sphinx-like” interlocking relationship of the two primary materials moves beyond existing

(classical) formal categories. Coupled with dynamic processes of their own, the large-scale formal processes of the movement, I have argued, involve a staggered and non-linear kind of form-as-process whereby the processuality manifests in the incremental crystallization of a given thematic material's latent expressive potentials. Adapted with subtlety and artistic discretion, the proposed tempo relations can potentially enact a narrative that otherwise remains dormant, as I hope to have rendered in my performance.

CHAPTER FIVE

THE MEANINGS OF CHOPIN'S SILENT CHORD

5.1 Introduction

Just before the end of Chopin's Prelude in E-minor there is a famously striking musical action, or rather, non-action: the music comes to a halt on what seems to be a dominant 4/2 chord pointing toward a Neapolitan resolution (or alternatively an enharmonically-spelled inverted German augmented 6th chord). The notation requires the pianist to pull the hands away from a resolution to an implied Neapolitan harmony. After this pause, the musical action resumes with a cadential gesture, with the bass in a lower register. This moment is the only silence accompanied by a fermata (before the double bar) throughout all twenty-four preludes of the opus. In this chapter I will reflect on the meanings of this "negative" action—that is, a gesture defined by an intention to *not* carry out a pre-meditated action—and how this musical non-action might relate to a possible network of meanings within this and between other preludes of Op. 28.

5.2 The Autograph Sketch

I begin by reflecting on the autograph sketch which contains the E-minor Prelude as a context from which to discern once palpable acts of composition, improvisation, and performance. **Example 5.1** shows the two

sides of a single autograph sketch-leaf.¹³⁶ The year, though omitted, was 1838, when Chopin spent the winter in Majorca with George Sand. On one side, Chopin sketched the A-minor prelude in its entirety and a fragment in C#-minor which did not later become a completed work. On the other side, he sketched out the Mazurka in E-minor, Op. 47, and beneath it the E-minor Prelude. The E-minor Prelude at this seminal stage already closely resembles the fair copy (the fair copy for the preludes in A minor and E minor are given as **Examples 5.2a** and **5.2b**).¹³⁷ Given the close temporal and spatial proximity of these works on the sketch leaf, I wish to reimagine, in what follows, a possible constellation of connected sounds, touches, and structures that might have animated Chopin's creative processes.

5.3 The Enharmonic Spelling

With respect to the right hand melody of m. 4 in the autograph sketch, Carl Schachter observes that:

[in m. 4] there is no flat before the B, but the natural sign in the next bar proves that the flat was certainly intended. In place of the flat there is a blotch before the note, whose position on the staff suggests that Chopin must first have written an A#, or at

¹³⁶ The example reproduces **Figures 1a** and **1b** from Jean-Jacques Eigeldinger, "Twenty-Four Preludes, Op. 28: Genre, Structure, Significance," in *Chopin Studies* ed. Jim Samson (Cambridge: Cambridge University Press, 1988), 169. The autograph is in the private possession of Daniel Drachman (Stevenson, Maryland, U.S.A.).

¹³⁷ *Preludia op. 28 : wydanie faksymilowe rękopisu ze zbiorów Biblioteki Narodowej w Warszawie* *Preludes, op. 28 : facsimile edition of the manuscript held in the National Library in Warsaw* Commentary by Zofia Chechlińska and Irena Poniątkowska (Warszawa: Narodowy Instytut Fryderyka Chopina, 2009).

least the sharp sign; no other possibility seems in the least plausible... it follows that Chopin's choice was a considered, not an impulsive one.¹³⁸

Schachter then points out that the enharmonic spelling runs against Chopin's usual preference for $\sharp 4^\wedge$ over $b5^\wedge$. The spelling, instead, forges a connection between Bb and A. The Bb of m. 4 prefigures the Bb in the bass of m. 23 immediately preceding the fermata. Yet in m. 23 the Bb does not yield to A as it did in m. 4; rather, it "resolves" improperly to a B-natural across the bar line. The fermata pause rhetorically severs the closing gesture of mm. 24-25 from the rest of the Prelude, drawing attention both to itself and to the harmonic connection—or rather, *disconnect*—between its flanking harmonies.

Chopin's enharmonic spelling in m. 23 puzzled the editors of the Paderewski edition to the extent that they opted to normalize the notation by changing the Bb into an A#. The editors justify the decision by pointing out, correctly, that A# is "the fundamental, altered note of the subdominant in E minor (A-C-E) with the seventh G added."¹³⁹ **Examples 5.3a and 5.3b** juxtapose the different harmonic functions implied by the two spellings. As an A#, the chord functions as an inverted German augmented 6th.¹⁴⁰ As **Example 5.3a** shows, the chord with the A# spelling (as the Paderewski edition has it) anticipates an upward resolution to 5[^] in the bass, cutting across the pause with a strong directedness toward the dominant. Chopin's spelling with Bb

¹³⁸ Carl Schachter, "The Prelude in E minor Op. 28 No. 4: Autograph Sources and Interpretation," in *Chopin Studies 2* ed. John Rink and Jim Samson (Cambridge: Cambridge University Press, 1994), 179.

¹³⁹ Frédéric Chopin, *Preludes for Piano* ed. Ludwik Bronarski and Józef Turczynski (Warsaw: Fryderyk Chopin Institute, Polish Music Publications, 1949).

¹⁴⁰ Alternatively one might wish to imagine the chord as a vii^7/V with a lowered third.

lends both the chord and the pause significantly different meanings. **Example 5.3b** shows that the chord, now as a dominant 4/2 of the Neapolitan, renders the linear and harmonic connection to B-natural a kind of syntactical *non sequitur*. Conventional voice-leading and harmonic practice would imply a resolution from Bb down to A-natural. Resolving the chord with the Bb spelling would thus imply a projection of a Neapolitan 6/3 harmony (bII⁶) into the pause with F-natural in the melody. Knowledge of Chopin's Bb spelling tempts the hands and ears of those privileged to have access to the notation to contemplate the Neapolitan sonority and its part-writing in private. It is possible that sensitive and imaginative listeners not privy to the score might also hear the Neapolitan during the silence. Without a visual confirmation, however, the subsequent dominant will more likely "clarify" the harmony in retrospect as an augmented 6th chord. Yet in light of Chopin's apparent insistence on the notation, I would like to imagine that he did hear—and in fact intended the pianist to hear and feel—a "phantom" Neapolitan in m. 23.

What then is the structural and expressive significance of the Phrygian as an unrealized harmonic "horizon"? Why imply it only to subvert it? What does this suggest to the performer who is given the time and space to contemplate, and perhaps even to embody in the hands, a resolution that he is asked *not* to realize? To explore these questions, I begin with the Prelude in A-minor drafted on the opposite side of the sketch-leaf.

5.4 The A-minor Prelude

Example 5.4 illustrates the three phases that the right hand melody undergoes: 1. the establishment of a process, 2. a critical disturbance, and 3. a variation of the original process.¹⁴¹ The example reveals an unusually modular conception of the melody, making use of the [025] trichord. While I do not imply set-theoretic sensibilities on Chopin's part, the association with set-theoretic operations does capture how he develops the motive. During the first phase, four successive statements of the trichord are linked via a common pitch-class, each alternating with an inverted form.¹⁴² The trichords are grouped into two pairs, each pair related by a fifth transposition. Each pair then combines to form an [0257] tetrachord, an important configuration in both preludes. The accumulation from these tightly-knit processes heightens the dramatic impact when they break down. After the left hand derails from the expected D major cadence at m. 11, the right hand enters in m. 14 on A on a weak beat—tentative and uncertain. For the first time, the note establishes no common-tone link with the previous trichord. Being the longest sounding pitch of the right hand melody, the A seems to initiate a repeat of the previous [025] trichord. Yet its length creates an expectancy for a possible shift in the melodic discourse. The A, after nearly seven quarter-note beats, succumbs to its own sonic decay at the piano. It is unable to reclaim E and F# to form the original [025] trichord; instead it gives way to the melody's first semitone

¹⁴¹ This three-part process of the right hand melody was pointed out by Leonard Meyer in *Emotion and Meaning in Music* (Chicago: University of Chicago Press, 1956), 93-97.

¹⁴² For analogous kinds of melodic chaining in Mozart, see Lewin, *Generalized Musical Intervals and Transformations*, 220-225.

interval, forming an isolated [015] trichord. The F-natural of m. 16 *displaces* the F# of m. 11, embodying a dramatic turning point in the discourse of the right hand and for the Prelude as a whole. The third phase then picks up from the critical F-natural of m. 16 and re-establishes the linking of [025] trichords, triggering a series of descending 3rds between mm. 17-21 that seem to pull inexorably downwards.

The left hand too begins by establishing a process that subsequently breaks down. However, in Leonard Meyer's interpretation this change "is conclusive, in the sense that the old process is not re-established."¹⁴³ The harmony projected by the left hand first establishes a sequence. Yet for seemingly unmotivated reasons the sequence derails from the expected resolution to D major in m. 11. The harmony then hones in on the structural dominant of A minor, arriving on a dominant 6/4 at m. 15 notwithstanding the continued surface dissonance.

Yet harmony constitutes but one aspect in the overall left hand process. Another is the left hand's somatic aspects. The sketch reveals that Chopin experimented with different ways of notating the basic figure. **Example 5.5a** transcribes an early version evidenced on the sketch, which seemed to have been quickly replaced by the version cited in **Example 5.5b**, which survived into the fair copy.¹⁴⁴ These versions, I argue, progressively clarify the independence of the inner voice from its outer frame. The working out of the

¹⁴³ Meyer, *Emotion and Meaning*, 77.

¹⁴⁴ Eigeldinger points out this part of the drafting process and makes a similar transcription in "Twenty-Four Preludes, Op. 28," 175. See also Eigeldinger, "Critical Commentary: 24 Préludes Op. 28," in *The Complete Chopin A New Critical Edition: Préludes Op. 28, Op. 45* ed. Jean-Jacques Eigeldinger (London: Edition Peters, 2003), 63.

notation shows Chopin's concern not only for the figure's musical outcome, but equally for the aspectual shapes with which the performer mentally represents the musical action. Framed in the terms of this dissertation, the representational content underlying the musical action can be seen to in turn contribute to the conceptual meaning of the left hand's utterance.

The final published version, with its long slur above the upper-beamed notes, seems to indicate a counterpoint of two distinct timbres: 1. a finger legato in the inner part projecting what has been dubbed the *Dies Irae* motive¹⁴⁵ accompanied by 2. a detached "walking" ostinato. The oscillating tenths frame and tightly enclose the *Dies Irae* motive in the middle fingers, keeping the motive and its expressive associations tightly in check within the murky texture. The action further induces in the left forearm of most pianists a steady oscillating motion from side to side pivoted around the chromatic inner voice. Chopin, who did not have particularly large hands, would have been attentive to these physical characteristics. The expressive meanings associated with the side-to-side motions might be gleaned from the "Funeral March" movement of the Bb-minor sonata, Op. 35. In the sonata, the ostinato chords of the left hand induce a similar oscillating motion likewise spanning a 10th and pivoting around an inner voice. The side-to-side swaying holds common aspects with the actual "marching" aspects of a walking procession for the dead, imparting the arm and writs motions at the keyboard with expressive associations derived from the funeral march topic. **Examples 5.6a and 5.6b**

¹⁴⁵ See Eigeldinger, "Twenty-Four Preludes," 176; Anatole Leikin, *The Mystery of Chopin's Préludes* (Farnham, Surrey: Ashgate, 2015), 73-78, in which he argues that the *Dies Irae* motive ripples throughout the entire opus.

compare the musical actions of the A-minor prelude and the “Funeral March” movement; **Example 5.6a** re-imagines the notation of the A-minor prelude to highlight the representational affinities shared by the two passages.

An intertextual association with the Funeral March movement lends hermeneutic support for hearing the four-note inner voice motive as mirroring the head motive of the Dies Irae chant. However, this mirroring at the outset is “fuzzy.” The inner part at the opening of the prelude replicates the contours but not the precise intervals of the chant. The profile of the Dies Irae motive is relieved only once throughout the prelude: at the G major cadence in mm. 6-7. Here the march-like oscillation induced by the outer voices reduces to an octave span on G allowing the left hand to remain calm in its movements. It is also during this brief respite in the major mode that the chromatic inner voice reverses its contour, thereby momentarily dispensing with the Dies Irae associations. However, at m. 15 the Dies Irae motive crystallizes in the correct scale-degree and contour. The crystallization of the motive as $3^{\wedge}-2^{\wedge}-3^{\wedge}-1^{\wedge}$ in A minor occurs in immediate proximity with the critical turning point in the right hand process when F-natural displaces F#. Moreover, after appearing in its proper scale-degrees at m. 15 the motive “bottoms out” and progresses no further.

To summarize my main points so far: two structural events that stem from a common narrative impulse converge at mm. 15-16. **Example 5.7** depicts these events: 1. the displacing of F# by F-natural resulting in the break of the right hand’s chain of [025] trichords, 2. the crystallization of the Dies Irae motive at the arrival of the structural dominant of A minor.

After m. 16, the right hand returns to its former process of chained [025]s, though here without alternating with its inverted pairs. As the example shows, the right hand now traverses a descending-thirds sequence after the F-natural of m. 16. The “chorale” music that follows (in mm. 21-22) contrasts sharply with the rest of the prelude. It represents an oasis of harmony, counterpoint, and rhythm at their purest—a momentary relief from the prelude’s overwhelming chromatic intensity. The passage seems to suggest, however tentatively, that E has returned as tonic accompanied by F# as a diatonic pitch class within an E horizon. Yet the “chorale” music ultimately proves unsuccessful as a kind of resistance to the continuation of the narrative discourse of the prelude cemented by the series of events coalescing at mm. 15-16. While we might bask in the chorale music’s momentary purity, with F# buried in a lower octave (within a B dominant triad), we sense that the chorale is ultimately unable to resist the momentum of A minor and its expressive associations.

The final cadence in A minor abruptly revokes any hopes of E becoming tonic. Yet tonality is only partially responsible for the ending’s sense of “tragic desolation,” as Robert Hatten calls it.¹⁴⁶ Contributing equally to this sense is the way with which a variant of the Dies Irae motive emerges and manifests itself at the structural cadence, where it assumes a new presence in the pianist’s right hand, the speaking voice of the prelude. The expressive association of the motive’s (re)appearance is made more intense by the omission of the first of the four-note figure, which maintains the pitch-class

¹⁴⁶ Robert Hatten, abstract from the 2010 meeting of the Society of Music Theory.

content but re-cast as an [013] trichord (B-C-A). The intentional content that underlies the physical transfer of the Dies Irae motive, as part of the first level of intentionality (CS₁) and the manner in which it manifests itself somatically at the cadence relates intimately to the network of meanings embodied in the final cadence, as the representational content of the second level of intentionality (CS₂). Until m. 19, the conceptual meanings of the Dies Irae motive owe in significant part to its physical representations. Throughout the prelude the motive is kept tightly in check within the middle fingers of the left hand encased by the wide-spanning ostinato and “murky” texture. At the final cadence, however, the earlier Dies Irae motive is released from its former registral confinement to take possession of the right hand and its “speaking fingers”—fingers 4 and 5—in its new, more forceful form. More significantly, the three-note motive now assumes the three-note rhythmic profile that had remained strictly within the domain of the right hand melody. The effect of this transference is that it displaces and takes over the right hand’s speaking voice.

One final detail corroborates this interpretation. **Example 5.8** shows Chopin’s notation of the final measures in the fair copy. Two notes of the three-note motive peer above the surface, as it were, following the sinking of the right hand’s [025] trichords into the chorale music.¹⁴⁷ In Chopin’s notation, the right hand pitches B and C in m. 21 are placed in the upper staff, preceded and followed by notes aligned with the lower staff. (The Paderewski edition,

¹⁴⁷ One can additionally hear a “phantom” continuation of the [215] chain sinking into the chorale music, further developing the sense of defeat of the right-hand process. The imagined [025s] are shown in square brackets in **Example 5.7**.

also shown in **Example 5.8**, does away with this notational feature.) The final A is again placed in the lower staff, welding the last note of the motive with the final tonic chord; the chord, though resembling the chorale chords in notation, takes on a very different effect given that it completes the three-note motive reminiscent of the Dies Irae.

Example 5.7 attempts to capture the process described above with arrows that lead from the Dies Irae motive in the left hand at m. 15ff to its (re)emergence in the right hand at the structural cadence. The structural events represented in **Example 5.7** combine to portray a narrative trajectory that descends into the expressive realms associated the *topoi* of the funeral march and death. As I shall argue below, these expressive associations influence the structural unfolding of the E-minor Prelude.

5.5 The E-minor Prelude

The close proximity of the E-minor Prelude to the A-minor Prelude on the sketch leaf invites speculation that Chopin drafted one within the sounding backdrop of the other. Though these two Preludes are not adjacent in Op. 28 as disseminated, it is conceivable, I argue, that Chopin sensed an occasion in the sketch process to establish a narrative thread between the two works. A fruitful way to listen might proceed by imagining the E-minor Prelude as emerging *out of* the A-minor Prelude. In what follows I argue that the E-minor Prelude engenders a counter-narrative that reverses the structural and expressive markers of the A-minor Prelude. In the later prelude, “failed”

E-minor elements from the earlier prelude are reinstated, while their “successful” A minor counterparts are transplanted in ways that strip away their original expressive potency. The pause moment in m. 23 of the E-minor Prelude marks the culmination at the end of such a process of restoration, albeit with a very surprising twist.

In terms of form, the prelude projects a large-scale period design. In terms of harmony, both the antecedent and the consequent traverse from relative chromatic obscurity towards focused diatonicism. While the left hand throughout maintains some degree of semitone voice leading, the right hand incrementally enlarges its melodic intervals during each part of the period. The characteristic upper neighbor of the lament melody grows wider at each of its stepwise descending stations. The result is that the emotional intensity of the right hand melody abates as its characteristic semitone “wailing” gesture progresses toward wider intervals over more consonant harmonic stations. The subdominant in m. 9, which lends functional harmonic support to 4[^], produces the first consonance between the hands since the opening chord. Scale degree 4[^], however, bypasses 3[^] to arrive on 2[^] over V. The missing 3[^], by Schachter’s account, makes for a very distinctive “gapped *Urlinie*,”¹⁴⁸ which is made more apparent when Chopin slurs 4[^] and 2[^] twice as a unit across the bar in mm. 9-11. The right hand side of **Example 5.9a** shows the resulting *Ursatz* of the E-minor prelude. When it is heard in relation with the melodic discourse of the A-minor prelude, the tones of the E-minor Prelude’s *Ursatz* render structural those elements from the earlier work that “failed” to obtain

¹⁴⁸ Schachter, “The Prelude in E minor Op. 28 No. 4,” 166-69.

structural status. **Example 5.9a** shows that the pitches of the gapped *Urlinie* reinstate the [0257] tetrachord that was denied its expected D major cadence and subsequently displaced by the critical [015] trichord. The example shows that the E-minor prelude absorbs this very same tetrachord, in pitch, as its peculiarly gapped fundamental line. The resonances shared between the same keys on the piano impart a consistency of range and timbre to the right hand melodies of both preludes, and further reinforce their narrative and structural relation.

As a corollary to the above processes, the E-minor Prelude reverses the three principal events that had successfully altered and eventually cemented the narrative discourse of the A-minor prelude (to recapitulate, these events are: 1. the onset of the [015] trichord introducing F-natural into the melody, 2. the crystallization of the Dies Irae motive at the dominant 6/4 of A-minor, and 3. the surfacing of the Dies Irae motive at the structural cadence). **Example 5.9b** attempts to show how the E-minor Prelude re-appropriates each one of these structural events, in each case eroding away its original expressive associations.

First, the top-most arrow shows the transformation of the [015] trichord back to the [025] trichord that it had then displaced. The very F# that was displaced here regains its footing in the new context as a consonant chord tone of the dominant of E minor. The figure shows that all members of the displaced [025] trichord—A, E, and F#—return as structural pitches and are given consonant support over the subdominant and dominant harmonies in mm. 9-10 (and correspondingly in mm. 18-19).

The second re-appropriation involves the earlier prelude's left hand configuration at the dominant 6/4 of m. 15ff. The bottom of **Example 5.9b** shows how the A-minor triad progressively frees itself from its association with F-natural across both phrases of the E-minor prelude. The bottom arrows show that the process culminates at the consequent phrase when F# is welded to the A-minor triad. This occurs during the subdominant expansion and climax in mm. 16-18, effectively re-integrating the pitch-class F# tightly back within the diatonic orbit of E minor. By managing how the pitch-classes F-natural and F# create stronger and weaker associations with an A-minor triad, Chopin can calibrate the balance between the tonalities E and A across both works. The subtle injection of F# in m. 16 and 18 help to (re)define A-minor as subdominant within the new tonal context of E.

And third, I argue that the most palpable sense of re-appropriation concerns the dissolution of the Dies Irae motive at the outset of the right hand melody. Schachter makes the observation that the octave upbeat on B was most likely an afterthought: he observes that the upbeat occupies a rather cramped spacing in the handwriting (see bottom of **Example 5.1**).¹⁴⁹ When played alongside the A-minor prelude, this detail reawakens in the right hand and ears the Dies Irae motive from the final cadence of the A-minor Prelude. The upbeat figure transfers its B and similar dotted rhythm up an octave to the principal register of the E-minor prelude. As a result, we sense the head of the Dies Irae motive lurking beneath the right hand's initial melodic statement in rhythmic augmentation (see **Example 5.9b**). Yet the identity of the motive

¹⁴⁹ Schachter, "The Prelude in E minor Op. 28 No. 4," 162.

begins to fade almost immediately. The pitches of the motive fail to realize themselves fully in the new register and tonal environment: the melody crucially does not forge a connection from C to A. Instead, the melody separates C from A with a passing Bb, resulting in the neighbor figure, B-C-B, that saturates multiple levels of the prelude.¹⁵⁰

Furthermore, I argue that Chopin imports and subsequently transforms the somatic aspects of the Dies Irae motive's "return" at the beginning of the E-minor Prelude. When the motive in its three-note form took hold of the structural cadence at the end of the A-minor prelude, the Dies Irae motive spoke through the "singing" fingers of the right hand, as common pianistic sense would determine: the 4th and 5th fingers of the performer's right hand articulate B and C respectively. From Jane Stirling's score of the E-minor Prelude, which contains Chopin's suggested fingerings, we infer that he intended the same fingers to likewise articulate B and C in mm. 1-4 of the E-minor Prelude, given that he intended the third finger to articulate Bb and A in mm. 4-5.¹⁵¹ The parallelism in fingering across the end of the A-minor Prelude and the beginning of the E-minor Prelude echoes Chopin's well-known dictum that each finger possesses its own distinctive voice. The shared fingering for the pitch-classes B and C, together with their shared rhythmic profile, brings the earlier intentionalistic representations of the Dies Irae motive to bear on the new context.

¹⁵⁰ The voice leading avoids a direct connection from C to A which would otherwise have brought back the pitches and contour of the Dies Irae motive. Such a connection, at this stage of the prelude, would have worked against the E-minor prelude's structural processes of re-appropriation.

¹⁵¹ See the editorial remarks in Eigeldinger, "Critical Commentary: 24 Préludes Op. 28," 64.

Yet the physical sense of the Dies Irae motive begins to erode in mm. 4-5 when we recall that Chopin instructs Jane Stirling to execute the motion from Bb to A with the 3rd finger. This typically Chopinesque “slide” locks the lower fingers, fingers 3 and 4, to the whole-step interval between A and B in mm. 5-8. The new fingering on A and B in mm. 5-8 compels a different intentionalistic representation of the neighbor note figure. Together with the pitch structure discussed earlier, the fingering contributes to the gradual dissolution of the Dies Irae motive’s core musical and somatic aspects. Phenomenologically, it is as if the hand were purging the Dies Irae association from within.

After such processes of re-appropriation, the chromatic voice leading reminiscent of the opening of the prelude returns from m. 21 onward and extends into cadential space. The return of the chromaticism (which was earlier associated with traces of the A-minor Prelude’s structural and expressive associations) threatens to undo the recuperative processes achieved thus far. Though aware that the spelling harbors expressive significance, Schachter nonetheless normalizes the Bb of m. 23 to an A# in his analysis and interprets the bass as the end point of an inverted augmented 6th span.¹⁵² An alternative analysis that heeds Chopin’s Bb spelling is shown in **Example 5.10**. The analysis considers the implied structural consequences were the Bb to take hold, showing that the chord directs toward a phantom Neapolitan resolution at the pause. In this reading, the Bb of m. 23 no longer functions as a chromatic lower neighbor to B-natural, but rather as part of a larger passing

¹⁵² Schachter, “The Prelude in E minor Op. 28 No. 4,” 172.

motion that forges a connection between the C in the bass of m. 21 and an implied A at the pause. As **Example 5.10** shows, the middleground bassline would thus articulate C-B-C-A, recalling at pitch the Dies Irae motive when it first materialized in m. 15 of the A-minor Prelude. Moreover, had Chopin allowed the Phrygian to realize, it would constitute the only instance in the E-minor Prelude when the ubiquitous B-C-B neighbor motive opens the door for C to link up with A at any level of the structure. In terms of the melodic structure of mm. 21-23, we sense the grip on F# loosening. For two measures since its structural arrival in m. 19, F# plants itself firmly on downbeats, yet after m. 21 F# is pushed onto beat four as a dissonant upper neighbor to E. The glue between F# and E seems to come undone as Bb in the left hand between mm. 21-23 signal for F-natural to once again displace F#. To be sure, replacing a diatonic scale degree with its chromatically altered form occurs frequently. Yet owing to the unusual gapped structure of the *Urlinie*, a resolution to F-natural in the melody at m. 23 would bring back the [015] trichord from the former prelude into the middleground voice leading (again) in pitch. A crystallization of the Phrygian so late into the piece would have proven destructive for the narrative discourse of the E-minor Prelude in light of its extensive processes of recuperation from the competing processes of the earlier prelude.

5.6 Musical Action and Musical Meaning

I now return to the series of questions I posed at the beginning of this chapter: what is the structural and expressive significance of the Phrygian as an unrealized harmonic “horizon” and how might its surrounding musical actions (or non-actions) relate to its set of meanings?

The ending of the E-minor Prelude creates a split in how meaning is constructed by each of the three principal musical actors—listener, reader, and performer—and their corresponding actions—listening, reading, and performing. Shielded from the notation, the sensitive listener might perceive an inherent ambiguity emanating from the chord in m. 23 in his first encounter. The momentum of the chromatic descent will have given him reason to suspect a pending resolution to the Phrygian. After the suspense of the fermata, however, he will be led to discard this suspicion at the dominant’s arrival, interpreting m. 23 in hindsight as an inverted augmented 6th chord. Had he wished to keep the Phrygian conjecture alive, there would be no means to confirm one way or another without recourse to the notation. The situation is quite different for the performer, who does have access to the notation. The Bb feeds into his/her second level intentional content and renders the Neapolitan projection in m. 23 its attendant aspectual shape. The visual impact of the notation makes possible the embodiment of the Neapolitan resolution; the notation confirms the intended representation of the chord at m. 23 as a dominant 4/2 of the Neapolitan.

There exists a further distinction between the intentionalities of the performer, who creates music through actions, and the reader, who creates music internally, often without outward actions. Since both have access to the notation, both are compelled to hold the implication of the Neapolitan in their intentionalistic representations. However it is only the performer, by way of his physical actions, who is equipped to subdue the Neapolitan's literal (re)emergence through a kind of negative action at the pause. The *smorzando* and fermata markings, I argue, are in this sense instructions for the pianist rather than descriptions of the music. They call upon the pianist to physically restrain a structural course set in motion since m. 21 at the onset of Bb in the tenor. I argue that the music comes to a halt not so much due to a decrease of directedness in the voice leading but because the agency of the performer prevents it from moving forward. The notation represents an appeal from within the internal narrative frame to the external agency of the pianist to "pull the plug," as it were, on the resurgence of the Phrygian, replete with its "negative" expressive associations from the A-minor Prelude. Fearful of the impending return of the Dies Irae motive at deeper levels of the voice leading, the performer is called upon to execute a "negative action" marked by intentionalistic representations of restraint and perhaps even fear. It is almost as if the Dies Irae motive returns here at the end of the E-minor Prelude to once more possess the performer from within, compelling him to exercise his agency in order to suppress and dispossess its return.

The full extent of the performer's presence emerges at the final cadential progression (mm. 24-25). The surface discontinuity at the cadence

leads one to imagine a shift from the “past-tense” of the narrative voice to the “present-tense” of the pianist’s consciousness. In both rhetorical and physical dimensions, the cadence is disconnected from the rest of the prelude in the domains of texture, register, dynamics, and tempo. Its “add-on” quality signals the pianist’s agency as the one responsible for bringing about global closure, rendering the final chords both structural and performative. The final tonic chord recalls the low E-octave in the structural cadence of the A-minor prelude, now as tonic root of E-minor. The return of F# to structural status is likewise given subtle attention. F# returns in m. 24 joined with E at the downbeat to create a 5/4 dissonance over the bass. The F#’s “successful” return in this register reinstates the very same F# of the chorale music of the A-minor prelude.

5.7 The Mazurka Op. 41 No. 1 and Chopin’s Tonal Experiments

In terms of tonal structural, the drama between the two preludes in large part owes to F-natural and F#’s capacity to leverage between the tonal centers of A-minor and E-minor. I would like to comment here on one additional feature of the sketch that might shed further light on the network of meanings between the A-minor and E-minor Preludes.

The inclusion and working out of the Mazurka in E-minor Op. 41 No. 1 immediately above the E-minor prelude suggests that Chopin was alert to the tonal interplay between A minor and E minor across the two preludes and the critical roles that F-natural and F# have in this interplay. **Example 5.11 shows**

the Mazurka's outer A-sections. The two basic four-bar units harbor an inherent ambiguity: they comprise two (PAC) cadential progressions with similar weight and emphasis, the first in A minor and the second in E minor. Taking the latter to be tonic, Schachter observes that the melodic structure of mm. 1-4 duplicates the gapped *Urlinie* of the E-minor prelude in miniature.¹⁵³ However, more astonishingly, in terms of the present discussion, the "structural cadence" at the end of the continuation (mm. 7-8) lacks a dominant and instead inflects heavily towards the Phrygian in bare octaves. Although such late chromatic inflections are not uncommon in Chopin's mazurkas, the substitution of the expected dominant (and its accompanying F#) with the F-natural Phrygian recalls the earlier ambiguity: between A-minor and E-minor, which of the two keys take precedence? Ultimately the piece ends in E, yet, the Phrygian undermines E as tonic and colors it with a distinctly dominant hue. As a point of leverage, the F-natural brings A-minor back onto the tonal horizon, even if only briefly.

If we imagine the Mazurka to have been drafted during the conception of the E-minor prelude, it might have served for Chopin as a kind of testing ground, in miniature, to manage balancing tonal ambiguity between the two keys. We might conjecture that, through working out the Mazurka, Chopin honed different ways of balancing between A minor and E minor by way of the Phrygian. Of the three works, the E-minor prelude could be said to embody this notion with the greatest subtlety. **Example 5.12** places all three works on a single continuum and depicts how each work calibrates the

¹⁵³ See Schachter, "The Prelude in E minor Op. 28 No. 4," 166. Of note too are additional foreground features that connect the melodic structures of these two works.

shifting relationship between the two keys. The example aims to capture how F-natural and F# in each case inflect a different balance on the tonal axis between A and E. In terms of the A-minor Prelude, the displacement of F# by F-natural paves the way towards an A-minor closure. In terms of the E-minor Prelude, as we have seen, the suppression of F-natural at the pause allows F# as the structural 2[^] to lead to global closure in E-minor (though we might now wish to question the degree of that closure). The Mazurka, I argue, stands midway on this continuum; owing to its formal modularity, F# and F-natural exert almost equally on the tonal fabric.

5.8 Cycle or Fragments

In this final section, I would like propose alternative ways to frame the question of cyclicism as related to Chopin's Op. 28 in its published form. I wish to suggest that the occasion afforded by the autograph and the results of the above analysis might prompt a re-thinking of the two dominant (and competing) strands in the modern reception of the Preludes. As Kevin Korsyn has observed, one strand regards the individual Preludes as either structurally or performatively autonomous entities; the other maintains that they are cyclically unified.¹⁵⁴ I believe that the compositional processes revealed by the sketch point to another way of conceiving this question. The kinds of structural, expressive, and somatic connections between the two preludes

¹⁵⁴ Kevin Korsyn, in *Decentering Music: A Critique of Contemporary Musical Research* (New York: Oxford University Press, 2003), 100-123 offers a close reading of the contemporary discourse on the Op. 28 preludes beyond these two broad categories.

proposed here are neither merely ephemeral nor binding within the set as a whole. Instead, their myriad relations constitute but one thread within a network of musical “plots” and “subplots” that can surface and submerge within the Preludes’ pre-determined tonal grid. The autograph, rather than as evidence of deserted paths on their way to “the finished work,” might be fruitfully construed as an instance in the creative process when possibilities for relations among disparate numbers were discovered, contemplated, and indulged. Such a perspective corroborates the known fact that Chopin himself performed at the most four preludes in one performance setting and that, as teacher, he assigned Stirling pairs of non-adjacent but tonally related preludes to be studied.¹⁵⁵

With these principles, we might wish to explore whether the structural associations between the A-minor and E-minor Preludes of which I have been speaking ripple through other numbers of the cycle. I point here to three instances where such connections prove musically meaningful. First, given the balancing roles of F# and F-natural, one might detect a similar structural function underlying the prominent F#s and F-naturals in Prelude No. 3 in G-major. These pitch-classes serve to balance tonicized harmonies a fifth on either side of the tonic. The antecedent phrase tonicizes the dominant while the consequent responds with a tonicization of the subdominant through a

¹⁵⁵ According to Eigeldinger: “The fact that Chopin never played the complete op. 28 in public is irrelevant to my argument. At most he performed four preludes on the platform (26 April 1841), which was not uncharacteristic of him or of the customs of the period. On the other hand the tonal relationships between eight preludes destined for a pupil’s studies reveal a concern for organisation. On the back of a copy of the Nocturnes op. 9 presented to Jane Stirling, he preserved two groups of four preludes: the first based on two pairs with identical tonics, a fifth apart (nos. 9, 4; 6, 11), and a second in which relationships of a fifth predominate (nos. 15, 21, 24 (marked Gb major!) and 17).” See Eigeldinger, “Twenty-Four Preludes Op. 28,” 170.

lengthened and expressive setting of F-natural in mm. 16-17. To prepare for the return of the tonic, F# is reclaimed at a lower register in m. 25 (following the cadential dominant of m. 24, which already points to G major as tonic). Second, we might hear the climactic Phrygian outbursts in Prelude No. 6 in B minor as diametrically related to the Phrygian's suppression in the E-minor Prelude. The Neapolitan outburst (set in hemiola) at mm. 13-14 is prepared by its own dominant, which contains a prominent F-natural in the left hand melody (m. 11). I will leave open here the hermeneutic implications of the Neapolitan in the context of the B-minor Prelude, and merely call attention to the potential for non-adjacent intertextuality with the E-minor Prelude. And finally, we might wish to hear a resonance with F-natural and the Neapolitan in the E-major Prelude: in m. 6 the Neapolitan harmony is implied (but unstated) via its dominant, in m. 10 a varied version of the opening phrase returns but now inflected towards F-natural.

I wish to suggest neither that any of these connections necessarily constitute evidence of "unity," nor that they are merely ephemeral. Rather I wish to challenge an either/or view that regards the Preludes as either systematically unified or merely fragmentary, to explore alternative narrative strands that weave throughout the set as a whole.

CONCLUSION

A project such as this is inevitably shaped and informed by elements of one's own autobiography. The ideas presented here reflect my experiences and intuitions as a practicing musician. In the broadest sense, the findings of this dissertation remain consistent with my overall artistic and scholarly outlook. I take it as an essential feature of the human condition that imaginative and creative acts partake coherently within the logical structures of the physical and biological world of which we are a part. Owing to this belief, I view rigor in logical thinking as a pre-condition for the cultivation of imagination and artistic creativity. These views are reflected in the formal structure of the dissertation itself, with **Part I** laying out the logical premise that then inspires the creative explorations in **Part II**.

In **Part I** I lay out a series of arguments that aim to understand how musical materiality might be said to relate to culturally constructed meanings. Though this relation is manifested in endlessly flexible ways, I argue that they are bound by a set of logical relations and structures derived from how we, as biological beings, relate to the world more generally. I identify this general capacity as intentionality and adapt our current understanding of its structural features to think through the specific case of human musicking. The three chapters of **Part II** then explore, each in its own way, what such an understanding might offer in terms of creatively enacting this relation in actual musical contexts. For instance, in **Chapter Three** I explore how bowing gestures in a Haydn quartet might be called upon to animate the more abstract

notions of large-scale structural rhythm. On the other hand, in **Chapter Five I** reflect on the possible network of meanings that might be associated with a chord that is alluded to but left un-played. The space carved out by **Part I** for relating senses of bodily gestures with musical meaning inspires the network of relations featured in the analyses of **Part II**.

The dissertation suggests several avenues for future work. I have focused for the most part on the relation between performative actions and meaning. One logical next step would be to understand the role of listening, framed likewise as a combination of two levels of intentionality, and from there to formulate a theory of musical communication and to explore how it overlaps with and differs from communication in ordinary language. Other forms of intentionality to explore might be the role of visual perception in both performance and listening, and how these participate within a holistic conscious field.

Perhaps the most important feature of this dissertation is that it aims to chart a new way that returns the pursuit of meaning to a once again viable goal in music criticism. As musicology became suspicious of close reading and the status of canonical texts, attention first shifted toward erecting historical and cultural contexts as a way to break down the boundaries between text and context, representation and event. More recently, music criticism has called upon New Historicism and material studies as another way to complicate and transform the status of the canon. The new found objects, however, have become ever more obscure, strange, marginal, and at times even delightfully quirky. While the status of the canon has indeed been complicated and

unsettled, the perceived problems of close reading can be seen to persist despite the substitution of traditional texts by material objects. With every attempt to replace texts with something else—whether they be historical/ cultural contexts or *objets trouvés*— new texts are born. Subjected to slow scholarly contemplation, objects, no matter how obscure or ephemeral, can have a tendency to stabilize. The result is that these discursive movements have moved us away from seeing meaning and its understanding as a goal of criticism. The search for meaning has been replaced by discrete micro-narratives built around discrete objects that engender exotic aesthetic experiences in-and-of-themselves, in significant part owing to their perceived otherness.

Yet as Nicholas Mathew and Mary Ann Smart have observed

The music boxes, mechanical ducks, and the like may give the impression of being somehow neutral and inert, independent of (and often aggressively countering) conventional aesthetic attachments and elite values...Historians of every stripe have long accepted that there is no such thing as “wie es eigentlich gewesen,” yet the stubborn materiality of these objects, documents, and eccentric personalities seems to inspire trust, to obscure the fact that the quirk—no less than the artworks that many in musicology have learned to approach with caution—is apt to ventriloquize our own affective sympathies.¹⁵⁶

Rather than confronting scholars on these new practices of aesthetic advocacy, the dissertation aims to understand the more fundamental processes that

¹⁵⁶ Nicholas Mathew and Mary Ann Smart, “Elephants in the Music Room: The Future of Quirk Historicism,” *Representations* 132 (2015): 66.

underlie how agents impose (“ventriloquize”) their affective meanings onto material objects. The scholarly focus here has been to inflect back onto the active intentionalities of the agent rather than remaining with the materiality itself.

Despite its concern with the central questions of meaning, this dissertation should not be seen as a nostalgic attempt to resuscitate earlier modes of close reading and textual criticism. Rather it seeks to engage in detailed exploration of musicking’s various features through a framework that understands the creation of any meaning as consistent with the structures of the biological world, regardless of historical and cultural differences. A one-sided emphasis on materiality encourages scholars to locate meaning outside the human realm, in ways that efface the critical and fine-grain distinctions between the animate and the inanimate that are central to our basic scientific understanding of the physical and biological world. It is my hope that once a foundation based on the latter principles is established, meaning and its pursuit can then be explored both creatively and rationally in any and all contexts.

WORKS CITED

- Abbate, Carolyn. "Music—Drastic or Gnostic?" *Critical Inquiry* 30, no. 3 (2004): 505-36.
- Austin, J. L. *How to Do Things with Words*. Cambridge, MA: Harvard University Press, 1962.
- Barrett, Estelle, and Barbara Bolt, eds. *Carnal Knowledge: Towards a 'New Materialism' through the Arts*. London: I. B. Tauris, 2013.
- Bates, Eliot. "The Social Lives of Instruments." *Ethnomusicology* 56, no. 3 (2012): 363-95.
- Bennett, Janet. *Vibrant Matter: A Political Ecology of Things*. Duke University Press, 2010.
- Bod, Rens. *A New History of the Humanities*. Oxford: Oxford University Press, 2014.
- Brown, Bill. "Thing Theory." *Critical Inquiry* 28, no. 1 (2001): 1-22.
- Bungert, James. "Bach and the Patterns of Transformation." *Music Theory Spectrum* 37, no. 1 (2015): 98-119.
- Chopin, Frédéric. *Preludes, Op. 28: Facsimile Edition of the Manuscript Held in the National Library in Warsaw*. With commentary by Zofia Chechlińska and Irena Poniatowska. Warszawa: Narodowy Instytut Fryderika Chopina, 2009.
- Clarke, Eric. "Music Perception and Musical Consciousness." In *Music and Consciousness: Philosophical, Psychological, and Cultural Perspectives*, edited by David Clarke and Eric Clarke, 193-213. Oxford: Oxford University Press, 2011.
- Clarke, Eric. *Ways of Listening: An Ecological Approach to the Perception of Musical Meaning*. Oxford: Oxford University Press, 2005.
- Cone, Edward T. *Musical Form and Musical Performance*. New York: Norton, 1968.
- Cone, Edward T. "Analysis Today." *Musical Quarterly* 46, no. 2 (1960): 172-88.

- Connolly, William. "The New Materialism and the Fragility of Things." *Millennium: Journal of International Studies* 41, no. 3 (2013): 399-412.
- Coole, Diane, and Samantha Frost, eds. *New Materialisms: Ontology, Agency, and Politics*. Duke University Press, 2010.
- Cooper, Grosvenor, and Leonard Meyer. *The Rhythmic Structure of Music*. Chicago: University of Chicago Press, 1960.
- Corcoran, Kevin. "The Trouble with Searle's Biological Naturalism." *Erkenntnis* 55, no. 3 (2001): 307-24.
- Cox, Arnie. "Embodying Music: Principles of the Mimetic Hypothesis." *Music Theory Online* 17, no. 2 (2011).
- Critical Organology, AMS 2013. <https://sites.sas.upenn.edu/ams2013-criticalorganology/>.
- De Landa, Manuel. *A Thousand Years of Non-Linear History*. New York: Zone Books, 2000.
- De Souza, Jonathan. "Musical Instruments, Bodies, and Cognition." PhD diss., University of Chicago, 2013.
- Dolan, Emily. *The Orchestral Revolution: Haydn and the Technologies of Timbre*. Cambridge: Cambridge University Press, 2013.
- Dolan, Emily. Roundtable on Critical Organology at the 2013 Meeting of the American Musicological Society. <https://sites.sas.upenn.edu/ams2013-criticalorganology>.
- Dolan, Emily. "Toward a Musicology of Interfaces." *Keyboard Perspectives* 5 (2012): 1-12.
- Dolan, Emily. "Editorial." *18th-Century Music* 8, no. 2 (2011): 175-77.
- Dreyfus, Hubert. "Introductory Essay: The Mystery of the Background *qua* Background." In *Knowing without Thinking: Mind, Action, Cognition, and the Phenomenon of the Backgrounded*, edited by Zdravko Radman, 1-11. London: Palgrave MacMillan, 2012.

- Dreyfus, Hubert. "A Phenomenology of Skill Acquisition as the Basis for a Merleau-Pontian Non-Representationalist Cognitive Science." (2004) <http://socrates.berkeley.edu/~hdreyfus/pdf/MerleauPontySkillCogSci.pdf>.
- Dreyfus, Hubert. "Phenomenological Description Versus Rational Reconstruction" *Revue Internationale de Philosophie* 55, no. 216/2 (2001): 181-96.
- Dreyfus, Hubert. "The Primacy of Phenomenology Over Logical Analysis." *Philosophical Topics* 27, no. 2 (1999): 3-24.
- Dreyfus, Hubert. "Heidegger's Critique of the Husserl/Searle Account of Intentionality." *Social Research* 60, no. 1 (1993): 17-38.
- Eigeldinger, Jean-Jacques. "Critical Commentary: 24 Préludes Op. 28." In *The Complete Chopin A New Critical Edition: Préludes Op. 28, Op. 45*, edited by Jean-Jacques Eigeldinger. London: Edition Peters, 2003.
- Eigeldinger, Jean-Jacques. "Twenty-Four Preludes, Op. 28: Genre, Structure, Significance." In *Chopin Studies*, edited by Jim Samson, 167-94. Cambridge: Cambridge University Press, 1988.
- Elder, Dean. "Serkin, as Interviewed by Dean Elder." *Clavier: A Magazine for Pianists and Organists* (November, 1970).
- Fisher, George, and Judy Lochhead. "Analyzing from the Body." *Theory and Practice* 27 (2002): 37-67.
- Frege, Gottlob. "On Sinn and Bedeutung." In *The Frege Reader*, edited by Michael Beaney, translated by Max Black. Oxford: Blackwell, 1997.
- Gallope, Michael. "Why Was this Music Desirable? On a Critical Explanation of the Avant-Garde." *The Journal of Musicology* 31, no. 2 (2014): 199-230.
- Gibson, James J. *The Ecological Approach to Visual Perception*. New York: Psychology Press, 1986.
- Gordon, Bonnie. "The Castrato Meets the Cyborg." *Opera Quarterly* 27, no. 1 (2011): 94-122.
- Gordon, Bonnie. "A Note from the Guest Editor." *Opera Quarterly* 27, no. 1 (2011): 1-3.

Gregg, Melissa, and Gregory Seigworth, eds. *The Affect Theory Reader*. Durham: Duke University Press, 2010.

Grice, H. P. "Meaning." *The Philosophical Review* 66, no. 3 (1957): 377-88.

Guck, Marion. "Analytical Fictions." *Music Theory Spectrum* 16, no. 2 (1994): 217-30.

Harrison, Daniel. "Three Short Essays on Neo-Riemannian Theory." In *The Oxford Handbook of Neo-Riemannian Theories*, edited by Edward Gollin and Alexander Rehding, 548-77. New York: Oxford University Press, 2011.

Hepokoski, James, and Warren Darcy. *Elements of Sonata Theory: Norms, Types, and Deformations in the Late-Eighteenth-Century Sonata*. New York: Oxford University Press, 2006.

Hepokoski, James. "Beyond the Sonata Principle." *Journal of the American Musicological Society* 55, no. 1 (2002): 91-154.

Hook, Julian. "David Lewin and the Complexity of the Beautiful." *Intégral* 21 (2007): 155-90.

Jankélévitch, Vladimir. *Music and the Ineffable*. Translated by Carolyn Abbate. Princeton: Princeton University Press, 2003.

Johnson, Mark. *The Meaning of the Body: Aesthetics of Human Understanding*. Chicago: University of Chicago Press, 2007.

Johnson, Mark. "Embodied Musical Meaning." *Theory and Practice* 22/23 (1997/98): 95-102.

Kane, Brian. "Excavating Lewin's 'Phenomenology.'" *Music Theory Spectrum* 33, no. 1 (2011): 27-36.

Kelly, Sean. "Closing the Gap: Phenomenology and Logical Analysis," *Harvard Review of Philosophy* 13, no. 2 (2005): 4-24.

Kittler, Friedrich. *Gramophone, Film, Typewriter*. Translated by Geoffrey Winthrop-Young and Michael Wutz. Stanford: Stanford University Press, 1999.

- Korsyn, Kevin. *Decentering Music: A Critique of Contemporary Musical Research*. New York: Oxford University Press, 2003.
- Kreuzer, Gundula. "Wagner-Dampf: Steam in *Der Ring des Nibelungen* and Operatic Production." *The Opera Quarterly* 27, nos. 2 and 3 (2012): 179-218.
- Latour, Bruno. *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford University Press, 2005.
- Lee, Mike Cheng-Yu. "A Response to Schmalfeldt's 'Form as Process of Becoming': Once More on the Performance and Analysis of Schubert's Sonata in A minor, Op. 42." *Music Theory Online* 16, no. 2 (2010).
- Leikin, Anatole. *The Mystery of Chopin's Préludes*. Farnham, Surrey: Ashgate, 2015.
- Lerdahl, Fred, and Ray Jackendorff. *A Generative Theory of Tonal Music*. Cambridge, MA: MIT Press, 1983.
- Lewin, David. *Musical Form and Transformation: Four Analytic Essays*. New Haven: Yale University Press, 1993.
- Lewin, David. *Generalized Musical Intervals and Transformations*. New Haven: Yale University Press, 1987.
- Lewin, David. "Music Theory, Phenomenology, and Modes of Perception." *Music Perception* 3, no. 4 (1986): 327-92.
- Leys, Ruth. "The Turn to Affect: A Critique." *Critical Inquiry* 37, no. 3 (2011): 434-72.
- Lochhead, Judy. "The Metaphor of Musical Motion: Is there an Alternative." *Theory and Practice* 14/15 (1989/90): 83-103.
- Loughridge, Deirdre. "Haydn's *Creation* as an Optical Entertainment." *The Journal of Musicology* 27, no. 1 (2010): 9-54.
- Massumi, Brian. *Parables for the Virtual: Movement, Affect, Sensation*. Durham: Duke University Press, 2002.

- Massumi, Brian. "The Autonomy of Affect." *Cultural Critique* 31 (Autumn 1995): 83-109.
- Mathew, Nicholas, and Mary Ann Smart. "Elephants in the Music Room: The Future of Quirk Historicism." *Representations* 132 (2015): 61-78.
- McLuhan, Marshall. *Understanding Media: The Extensions of Man*. Cambridge, MA: MIT Press, 1994.
- Meyer, Leonard. *Emotion and Meaning in Music*. Chicago: University of Chicago Press, 1956.
- Mitchell, W. J. T. *Picture Theory: Essays on Verbal and Visual Representation*. Chicago: University of Chicago Press, 1994.
- Mithen, Steven. "Creations of Pre-Modern Human Minds: Stone Tool Manufacture and Use by Homo Habilis, Heidelbergensis and Neanderthalensis." In *Creations of the Mind: Theories of Artifacts and Their Representation*, edited by Eric Margolis and Stephen Laurence, 289-311. Oxford: Oxford University Press, 2007.
- Monahan, Seth. "Action and Agency Revisited." *Journal of Music Theory* 57, no. 2 (2013): 321-71.
- Morgan, Robert. "The Delayed Structural Downbeat and Its Effect on the Tonal and Rhythmic Structure of Sonata Form Recapitulation." Ph.D. diss., Princeton University, 1969.
- Moseley, Roger. "Digital Analogies: The Keyboard as Field of Musical Play." *Journal of the American Musicological Society* 68, no. 1 (2015): 151-228.
- Moseley, Roger. "Playing Games with Music (and Vice Versa): Ludomusicological Perspectives on *Guitar hero* and *Rock band*." In *Taking It to The Bridge: Music as Performance*, edited by Nicholas Cook and Richard Pönttengill, 279-318. Michigan: University of Michigan Press, 2013.
- Moseley, Roger. "Entextualization and the Improvised Past." *Music Theory Online* 19, no. 2 (2013).

- Moshaver, Maryam. "Telos and Temporality: Phenomenology and the Experience of Time in Lewin's Study of Perception." *Journal of the American Musicological Society* 65, no. 1 (2012): 179-214.
- Piecut, Benjamin. "Actor Networks in Music History: Clarifications and Critiques." *Twentieth-Century Music* 11, no. 2 (2014): 191-215.
- Rawls, John. *A Theory of Justice*. Cambridge, MA: Harvard University Press, 1971.
- Rings, Steven. *Tonality and Transformation*. New York: Oxford University Press, 2011.
- Rings, Steven. "Review of David Lewin, *Generalized Musical Intervals and Transformations, Musical Form and Musical Transformation: Four Analytic Essays, Studies in Music with Text*," *Journal of Music Theory* 5, no. 1 (2006): 111-27.
- Rings, Steven. "Tonality and Transformation." Ph.D. diss., Yale University, 2006.
- Rosen, Charles. *Sonata Forms*. New York: W. W. Norton, 1988.
- Saslaw, Janna. "Forces, Containers, and Paths: The Role of Body-Derived Image Schemas in the Conceptualization of Music." *Journal of Music Theory* 40, no. 2 (1996): 217-43.
- Saslaw, Janna. "Gottfried Weber and Multiple Meaning." *Theoria* 5 (1990): 74-103.
- Satyendra, Ramon. "An Informal Introduction to Some Formal Concepts from Lewin's Transformational Theory." *Journal of Music Theory* 48 (2004).
- Sayes, Edwin. "Actor-Network Theory and Methodology: Just What Does It Mean to Say that Nonhumans Have Agency?" *Social Studies of Science* 44, no. 1 (2014): 134-49.
- Schachter, Carl. "The Prelude in E minor Op. 28 No. 4: Autograph Sources and Interpretation." In *Chopin Studies 2*, edited by John Rink and Jim Samson, 161-82. Cambridge: Cambridge University Press, 1994.

- Schachter, Carl. "Either/Or." In *Schenker Studies*, edited by Hedi Siegel, 165-79. Cambridge: Cambridge University Press, 1990.
- Schachter, Carl. "Rhythm and Linear Analysis: A Preliminary Study." *Music Forum* 4 (1976): 281-334.
- Schenker, Heinrich. *Free Composition*. Translated by Ernst Oster. New York: Longman, 1978.
- Schmalfeldt, Janet. *In the Process of Becoming: Analytic and Philosophical Perspectives on Form in Early Nineteenth-Century Music*. New York: Oxford University Press, 2011.
- Schmalfeldt, Janet. "Response to Lee." *Music Theory Online* 16, no. 2 (2010).
- Schmalfeldt, Janet. "On Performance, Analysis, and Schubert." *Per Musi: Revista Acadêmica de Música* 5-6 (2002): 38-54.
- Schmalfeldt, Janet. "Form as the Process of Becoming: The Beethoven-Hegelian Tradition and the 'Tempest' Sonata." In *Beethoven Forum* 4, edited by Christopher Reynolds (1995): 37-71.
- Schmitz, Michael. "The Background as Intentional, Conscious, and Nonconceptual." In *Knowing without Thinking: Mind, Action, Cognition, and the Phenomenon of the Backgrounded*, edited by Zdravko Radman, 57-82. London: Palgrave MacMillan, 2012.
- Schumann, Robert. "Schubert's Symphony in C." In *The Musical World of Robert Schumann: A Selection from His Own Writings*, edited and translated by Henry Pleasants. London: Macmillan, 1965.
- Searle, John. "The Phenomenological Illusion." In *Philosophy in a New Century*. Cambridge: Cambridge University Press, 2008.
- Searle, John. *Mind: A Brief Introduction*. New York: Oxford University Press, 2004.
- Searle, John. "Meaning, Mind and Reality." *Revue Internationale de Philosophie* 2, no. 216 (2001): 173-79.

- Searle, John. "The Limits of Phenomenology." In *Heidegger, Coping, and Cognitive Science: Essays in Honor of Hubert L. Dreyfus, Volume 2*, edited by Mark A. Wrathall and J. E. Malpas, 71-92. Cambridge, MA: MIT Press, 2000.
- Searle, John. "Consciousness, the Brain and the Connection Principle: A Reply." *Philosophy and Phenomenological Research* 55, no. 1 (1995): 217-32.
- Searle, John. *The Rediscovery of the Mind*. Cambridge, MA: MIT Press, 1994.
- Searle, John. *Intentionality: An Essay in the Philosophy of Mind*. Cambridge: Cambridge University Press, 1983.
- Searle, John. *Speech Acts*. Cambridge: Cambridge University Press, 1969.
- Sessions, Roger. *Harmonic Practice*. New York: Harcourt, Brace, and World, 1951.
- Shani, Itay. "Consciousness and the First Person: A Critical Appraisal of Searle's Connection Principle." *Journal of Consciousness Studies* 14, no. 2 (2007): 57-91.
- Shouse, Eric. "Feeling, Emotion, Affect." *Media/Culture* 8, no. 6 (December 2005). <http://journal.media-culture.org.au/0512/03-shouse.php>.
- Small, Christopher. *Musicking: The Meanings of Performance and Listening*. Middletown, CT: Wesleyan University Press, 1998.
- Stout, Rowland. *Action*. Montreal: McGill University Press, 2005.
- Taruskin, Richard. "Agents and Causes and Ends, Oh My." *The Journal of Musicology* 31, no. 2 (2014): 272-93.
- Taruskin, Richard. *The Oxford History of Western Music, Vol. 1: Earliest Notations to the Sixteenth Century*. Oxford: Oxford University Press, 2005.
- Tomlinson, Gary. *A Million Years of Music: The Emergence of Human Modernity*. New York: Zone Books, 2015.
- Treitler, Leo. "'To Worship that Celestial Sound': Motives for Analysis." *The Journal of Musicology* 1 (1980): 153-70.

Tresch, John, and Emily Dolan. "Toward a New Organology: Instruments of Music and Science." *Osiris* 28, no. 1 (2013): 278-98.

Webster, James. "Formenlehre in Theory and Practice." In *Musical Form, Forms & Formenlehre: Three Methodological Reflections*, edited by Pieter Bergé. Leuven: Leuven University Press, 2009.

Webster, James. *Haydn's "Farewell" Symphony and the Idea of Classical Style*. Cambridge: Cambridge University Press, 1991.

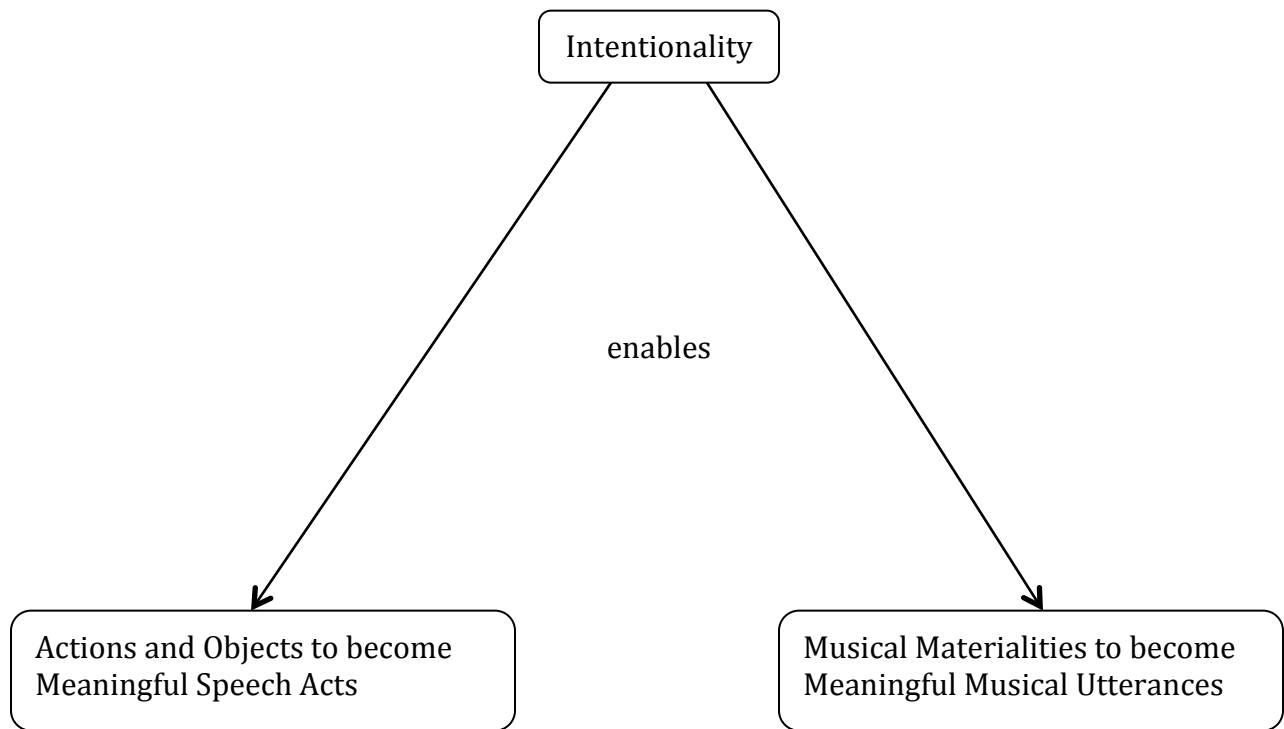
Westphal, Kurt. *Der Begriff der musikalischen Form in der Wiener Klassik: Versuch einer Grundlegung der Theorie der musikalischen Formung*. Leipzig: Breitkopf & Härtel, 1935.

White, Leslie. "The Symbol, the Origins of Human Behavior." *Philosophy of Science* 7, no. 4 (1940): 451-63.

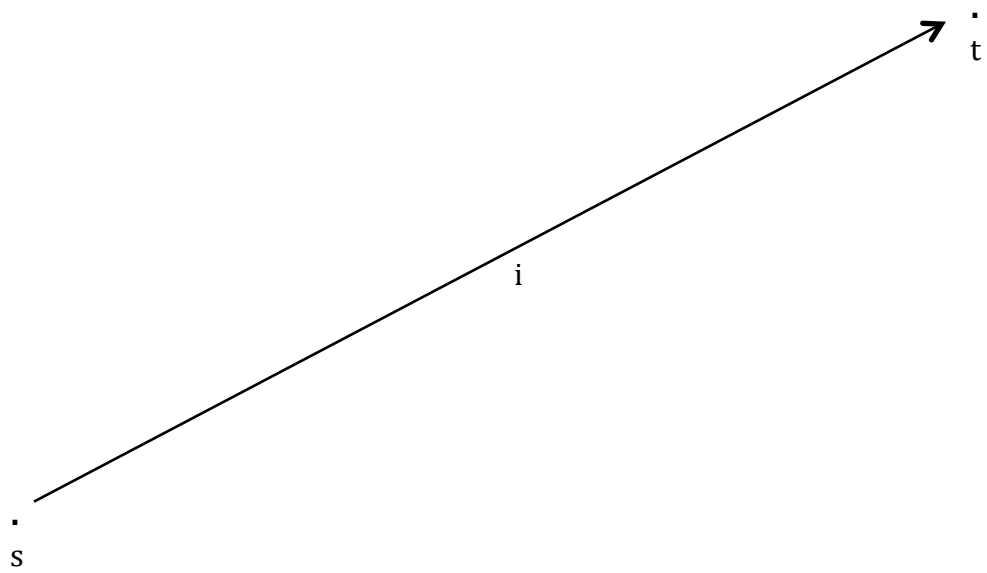
Yearsley, David. *Bach's Feet*. Cambridge: Cambridge University Press, 2012.

Zaslaw, Neal. "Mozart's Tempo Conventions." In *International Musicological Society: Report of the Eleventh Congress of Copenhagen*, edited by Henrik Glahn, Søren Sørensen, and Peter Ryom. Copenhagen, 1972.

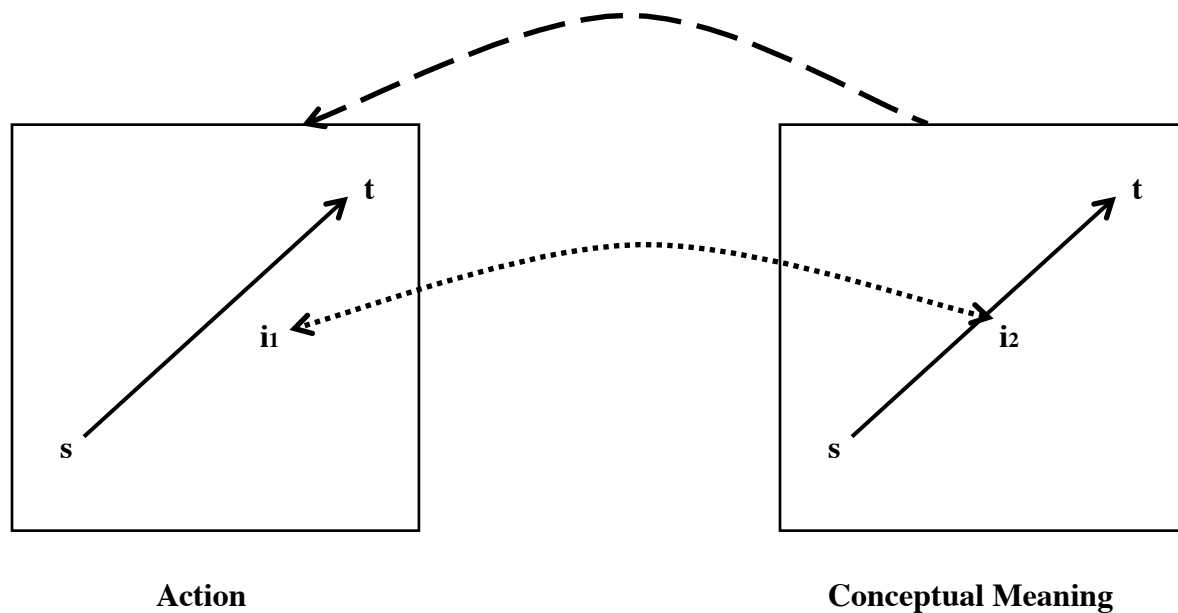
Zbikowski, Lawrence. *Conceptualizing Music: Cognitive Structure, Theory, and Analysis*. New York: Oxford University Press, 2002.



Example 0.1



Example 0.2



s, t = musical objects
i1 = intentional contents of musical action
i2 = intentional contents of musical meaning
 <-----> = relation between musical materiality and meaning
 <----- = imposition of meaning intention onto physical action

Example 0.3

	Cognition		Volition	
	Perception	Belief	Intention in Action	Desire
Direction of Fit	m-w	m-w	w-m	w-m
Causal Self-Reference	YES	NO	YES	NO
Direction of Causation in Causal Self-Reference	w-m	None	m-w	None

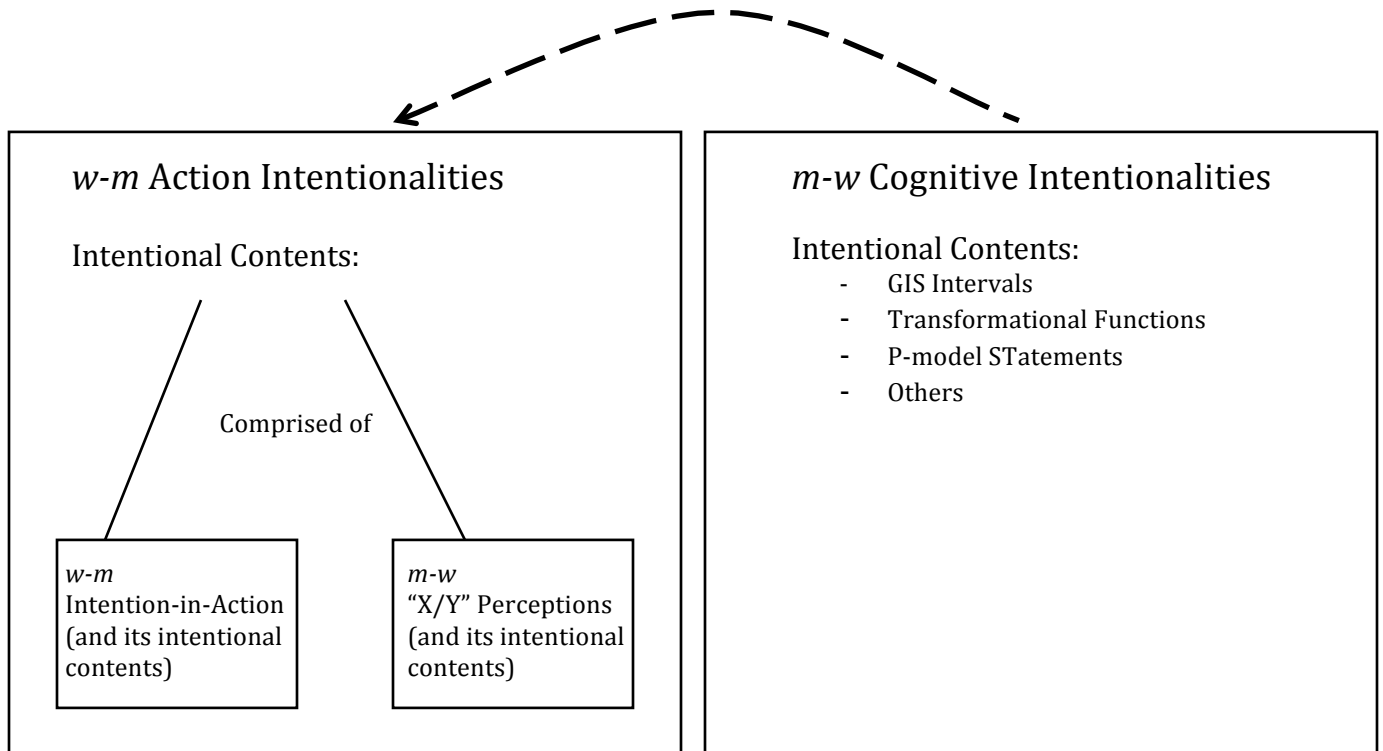
Table 1.1

Lewinian Model:	Intervallic	Transformational
Group structure:	GIS, $int(s, t)=i$	STRANS, etc., $Ti(s)=t$
Character of the agent's stance:	"passive," observational	"active," embodied
Intentionality:	Perception	Action
Class of Intentional State:	"Cognition"	"Volition"
Direction of Fit:	Mind-to-World ($m-w$)	World-to-Mind ($w-m$)

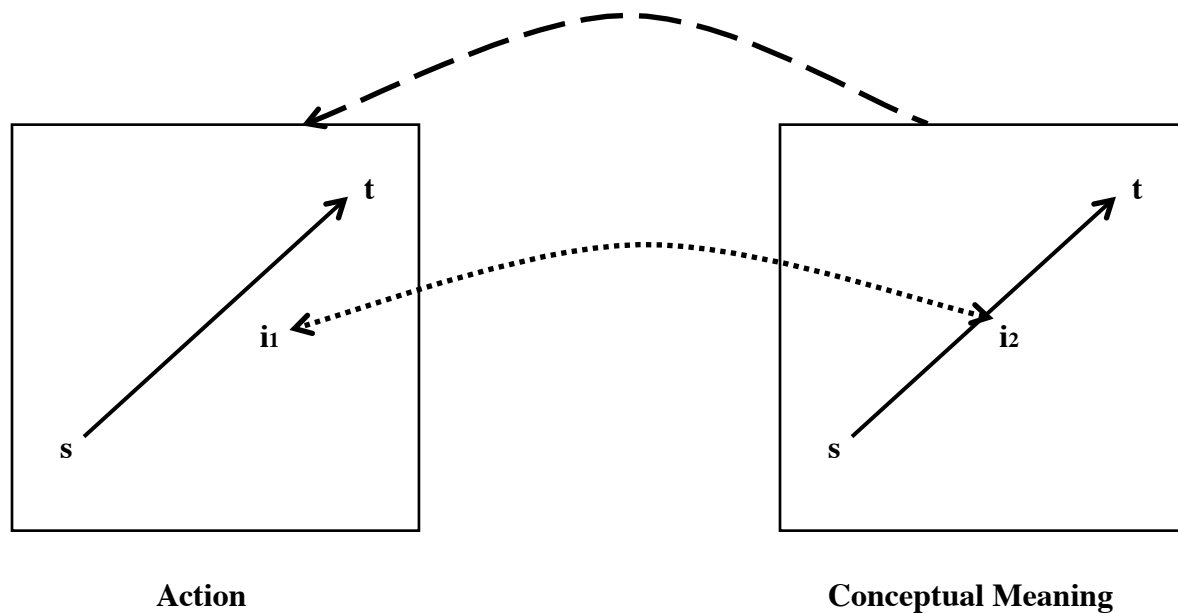
Table 2.1

Intentionalistic Structure of a Meaningful Musical Utterance

imposition of second level (meaning) conditions of satisfaction
on first level (materiality) conditions of satisfaction



Example 2.1



s, t = musical objects
i₁ = first level conditions of satisfaction (CS₁)
i₂ = second level conditions of satisfaction (CS₂)
 <-----> = relation between musical materiality and meaning
 <----- = imposition of meaning intention onto physical action

Example 2.2

5^

N
6^

5^

Allegro sostenuto ♩ = 104

p

Ped.

* Ped. *

Example 2.3

a. b. c. d.

4 6 4
2 3

up down up down up down up down

Structural/Rhythmic Accentuation (Foreground) Structural/Rhythmic Accentuation (Middleground) Structural/Rhythmic Accentuation (Middleground)

Example 3.2

a. b. c. d.

4 4
3 3

up down up down up down up down

Structural/Rhythmic Accentuation (Foreground) Structural/Rhythmic Accentuation (Middleground) Structural/Rhythmic Accentuation (Middleground)

Example 3.3

1 3 5

The image shows a handwritten musical score on two staves, treble and bass clef, with a key signature of one flat (B-flat). The score is annotated with various structural and rhythmic markings. Above the staves, there are numbers 1, 3, and 5, and a line with a triangle and the number 3. Below the staves, there are Roman numerals: I, I₃⁶, ii⁶, V⁷, and I. A large curved arrow points from the text 'Structural Rhythmic Accentuation' to a specific point in the music. Below this text, there are two sets of plus signs: one with 'up' and another with 'down'.

Structural Rhythmic Accentuation

up

down

Example 3.4

7

11

17

16

15

14

The image shows a handwritten musical score for two staves. The top staff is in treble clef and the bottom staff is in bass clef. Both staves have a key signature of one flat (B-flat) and a common time signature (C). The score includes various musical notations such as notes, rests, and beams. There are several annotations in the left margin, including the numbers 14, 15, 16, 17, 11, and 7, each enclosed in a small box. The right margin contains the letters 'I' and 'II' with arrows pointing to specific notes. The bottom staff has a large '3' written below it, and the top staff has a large '3' written above it. There are also some handwritten notes and symbols, such as '6 3 (2)' and 'I II 6 V 7', scattered throughout the score.

Example 3.5

a.

b.

c.

Structural Rhythmic Accentuation

<p>UP down UP</p>	<p>UP down UP</p>	<p>UP down UP</p>

Example 3.6

a.

- 11 12 13 14 15 16 17

b.

- 18 19 20 21 22 23 24

Handwritten musical score for two staves, labeled 'a.' and 'b.'. The score consists of two systems of music. The first system (labeled 'a.') has measures 11-17. The second system (labeled 'b.') has measures 18-24. The notation includes notes, rests, and various musical symbols like slurs, ties, and accents. Below the staves, there are handwritten annotations including 'UP', 'DOWN', 'Structural/Rhythmic Accentuation', and '(Foreground)'.

UP
DOWN
Structural/Rhythmic
Accentuation
(Foreground)

UP
DOWN
Structural/Rhythmic
Accentuation
(Midground)

Example 3.7

TM₃

TM₁, TM₂

48

42

40

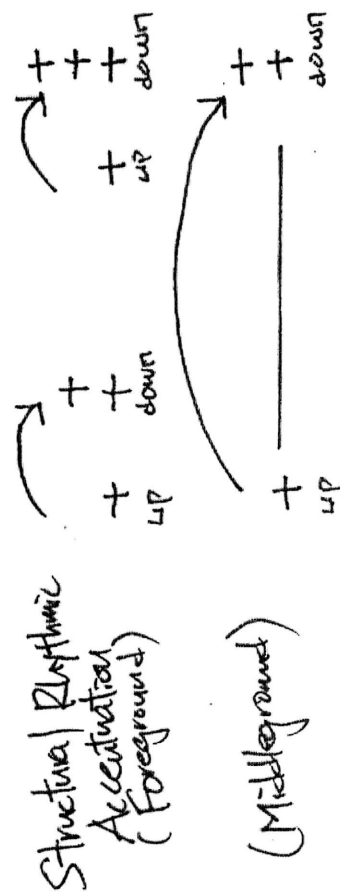
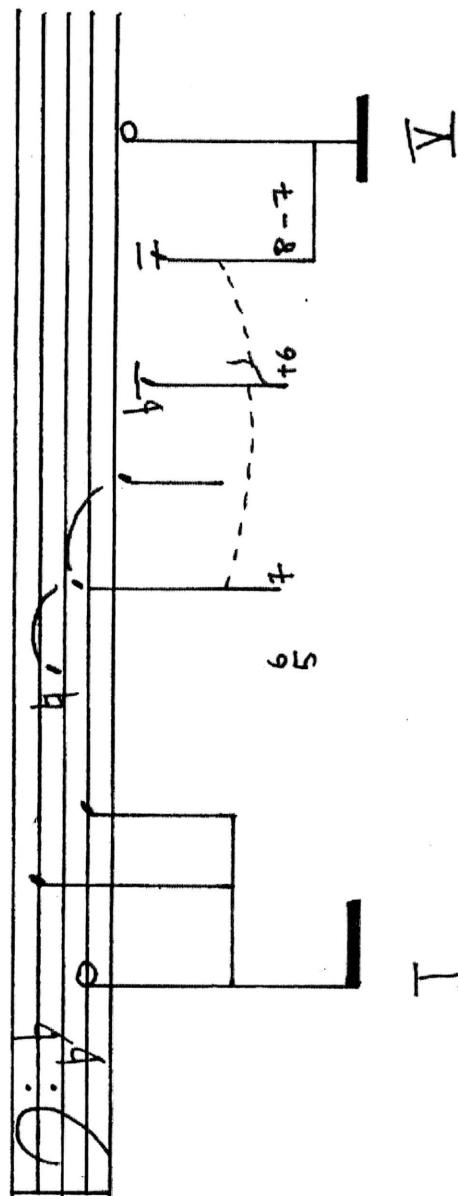
33

29

28

17

11

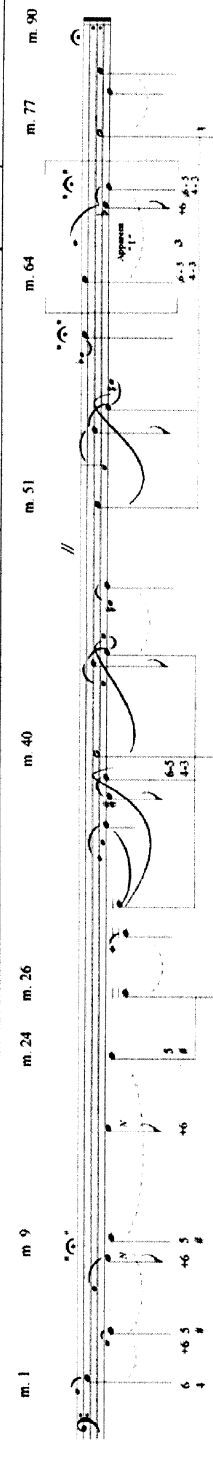


Example 3.8

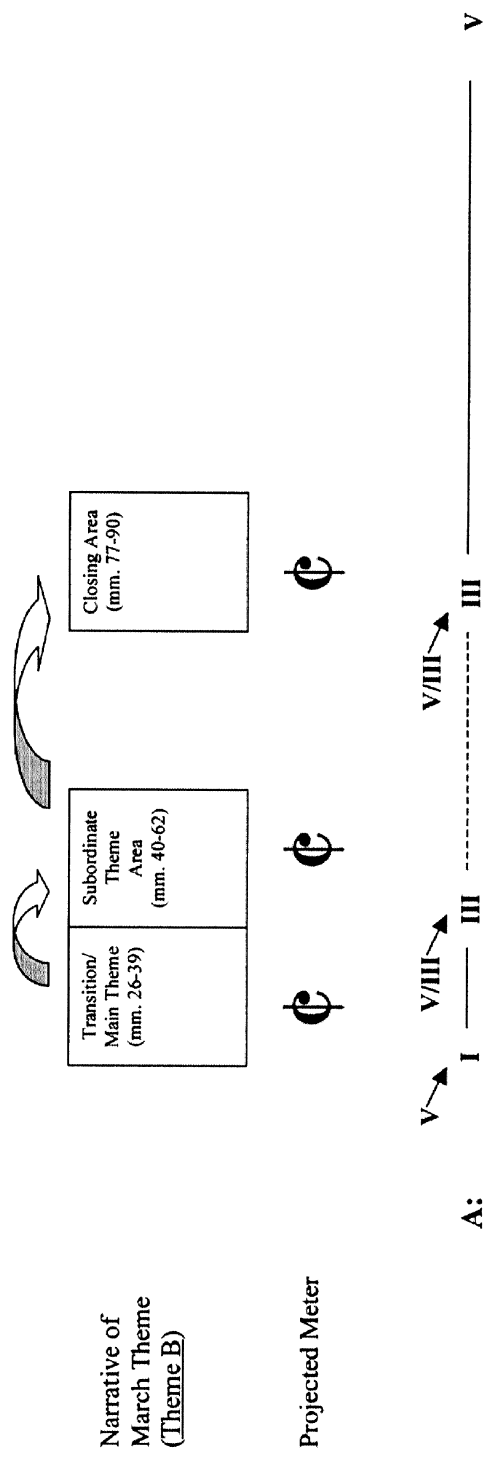
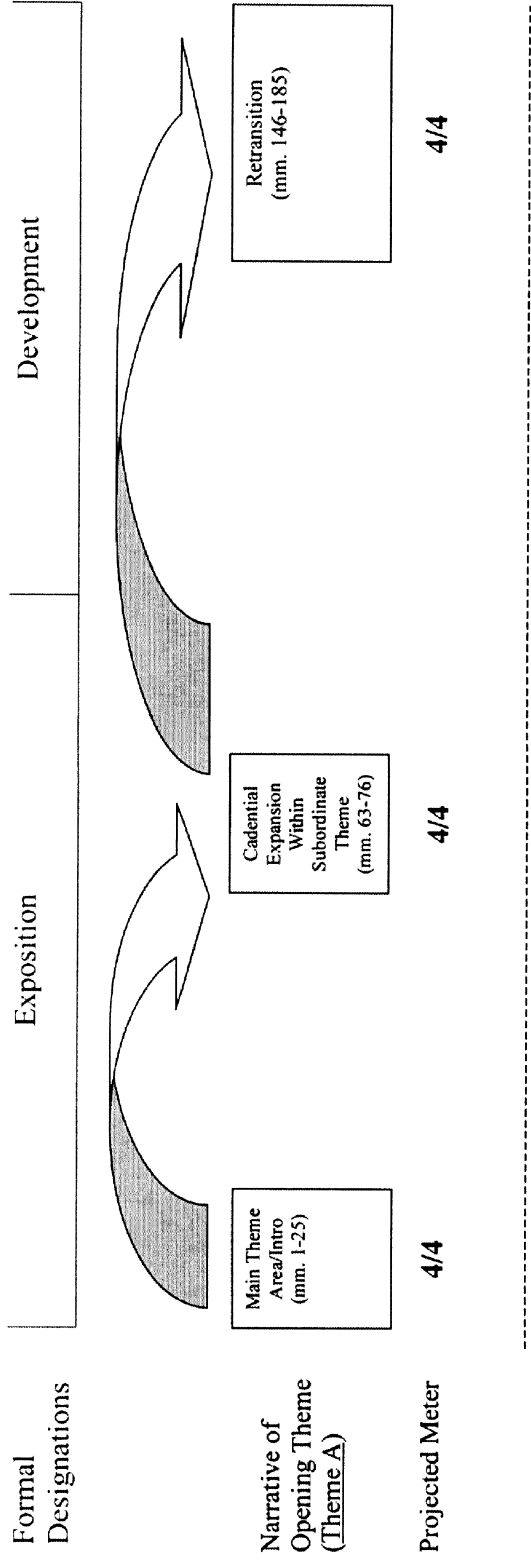
[illegible]

Example 3.9

Example 3.9

Formal Functions	Background Formal Units + Formal Functions	Exposition mm. 1 - 90									
	Middleground Formal Units + Formal Functions	Subordinate Thematic Group mm. 40 - 90									
	Foreground Phrase Units	Main Thematic Group/ Slow Introduction mm. 1 - 25		Transition/ Main Theme/ Subordinate Theme mm. 26-39		Part I: Period with Expanded Consequent mm. 40 - 76			Part II: Closing mm. 77 -90		
	Foreground Formal Functions	Sentence with Expanded Continuation		Loose-knit Sentence		Expanded Consequent		Cadential Expansion/ Parenthetical Interpolation			
		Presentation b.i. 1 b.i. 2	Continuation: Standing on the dominant	Present.1	Present.2	Cont. +Cadence	Antecedent Present.	Cont. Cad.			
Structural Domains	Tonal Structure										
	Thematic Design	Main Theme		Subordinate Theme		Subordinate Theme: Var. I		Subordinate Theme: Var. II		Main Theme	
	Topical Reference	Rhetorical Style/ Recitative	Fantasia-like elaboration over dominant		March		Liquidation of March Topic		Rhetorical Style/ Recitative		
	Projected Meter	4/4	♩ = 60 92-96		♩ = 92-96		♩ = 120		♩ = 92-96		
	Performance Tempo		♩ = 120		♩ = 92-96		♩ = 120		♩ = 92-96		

Example 4.1



Example 4.2

Formal Designations:	Exposition	Development	Recapitulation
	Trans. 2 nd group	Retransition/Thematic Return + Motivic/Harmonic Working Out	Tonal Return

“Horizon”
Tonalties :

F# min A min C min (expanded!) E^b min F# min

1

26

40-89

140

142

150

156

166

170

174

177

178-185

186

A:

V → I

III

V

I

Example 4.3

Schubert's Symphonies First Movement Tempo/Meter Headings

Symphony No. 1 in D major – D. 82 (1813)

Movt.	Tempo Heading	Meter	Form
I.	Adagio	2/2	Slow Introduction
	Allegro vivace	2/2	Sonata Allegro

Symphony No. 2 in Bb major – D. 125 (1814-15)

Movt.	Tempo Heading	Meter	Form
I.	Largo	4/4	Slow Introduction
	Allegro vivace	2/2	Sonata Allegro

Symphony No. 3 in D major – D. 200 (1815)

Movt.	Tempo Heading	Meter	Form
I.	Adagio maestoso	4/4	Slow Introduction
	Allegro con brio	4/4	Sonata Allegro

Symphony No. 4 in C minor – D. 417 (1816)

Movt.	Tempo Heading	Meter	Form
I.	Adagio molto	3/4	Slow Introduction
	Allegro vivace	4/4	Sonata Allegro

Symphony No. 6 in C major – D. 589 (1817-18)

Movt.	Tempo Heading	Meter	Form
I.	Adagio	3/4	Slow Introduction
	Allegro	2/2	Sonata Allegro

Symphony No. 8 in C major – D. 944 (1825-26)

Movt.	Tempo Heading	Meter	Form
I.	Andante	4/4	Slow Introduction
	Allegro ma non troppo	2/2	Sonata Allegro

Example 4.4

Examples I and II

Mozart: Finale of the *Quartet in B-flat major*, K. 458 (1784)

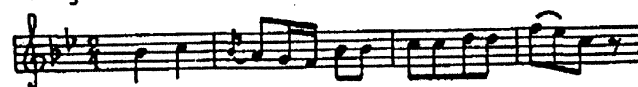
a) Sketch version:

Presto



b) Final version:

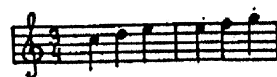
Allegro assai



J.N. Hummel: *Ausführliche theoretisch-practische Anweisung zum Pianofortespiel . . .*,
p. 62 (Vienna, 1828)

a)

Presto



b)

Allegro assai



Example 4.5

A minor
Prelude

Unfinished
Fragment
(in C# minor)



E minor
Mazurka
from
Op. 41

E minor
Prelude



Example 5.1



Example 5.2a



Example 5.2b



22 23 24 25

#4
Ger⁺⁶ 5
V₄³ — #

This block shows the musical notation for measures 22 through 25 with harmonic analysis labels below. The treble clef staff contains a melodic line with a half note in measure 22, a quarter note in measure 23, and half notes in measures 24 and 25. The bass clef staff contains a harmonic line with chords in measures 22 and 23, and single notes in measures 24 and 25. The key signature has one sharp (F#). The harmonic analysis labels are: #4, Ger⁺⁶, 5, V₄³, and #.

Example 5.3a



22 23 24 25

$\hat{b}5$ $\hat{b}5$
 V_1 \rightarrow $bII^6?$

Example 5.3b



Example 5.5a





Marche funèbre.

The musical score is for a piano introduction to a funeral march. It is written in E-flat major (three flats) and 3/4 time. The piece begins with a piano (*pp*) dynamic and is characterized by a heavy, sustained feel (*pesante e sostenuto*). The right hand features a melodic line with a triplet of eighth notes (G4, A4, Bb4) followed by a dotted quarter note (C5), and then a sequence of eighth notes (Bb4, A4, G4, F4, E4, D4). The left hand provides a harmonic accompaniment with chords and single notes, including a triplet of eighth notes (C4, Bb3, A3) and a sequence of eighth notes (G3, F3, E3, D3, C3, Bb2). Fingerings are indicated for both hands, and the tempo/mood is marked as *pp pesante e sostenuto*.

Example 5.6b

F#4 —————> F#4 —————> (F#3) —————>

[025] —————> [015]

Dies Irae [013]

E: 5̂ #4̂ 5̂ 3̂

A: 3̂ 2̂ 3̂ 1̂

E⁹

A: 2̂ 3̂ 1̂

Fr⁺⁶

V₄⁶

E: I V I

5̂ #3̂ 7̂

(Emaj)

Emin —————> Amin —————>

Example 5.7



Example 5.8

A minor Prelude
E minor Prelude

1
8
11
21
22
1
16-18
19-24
25

The image shows a musical score for two preludes: A minor and E minor. The score is written for piano, with a treble and bass staff. Above the treble staff, there are two sets of fingering and voicing instructions. The first set, for the A minor prelude, is labeled [0257] and shows a D major triad (D, F#, A) with fingerings 6, 5, 2, 3. The second set, for the E minor prelude, is also labeled [0257] and shows an E minor triad (E, G, B) with fingerings 5, 4, (3)!, 2, 1. Below the treble staff, there are two sets of harmonic analysis. The first set, for the A minor prelude, is labeled I-V-I and shows a D major triad (D, F#, A) with fingerings 6, 5, 2, 3. The second set, for the E minor prelude, is labeled Emin: I-V-I and shows an E minor triad (E, G, B) with fingerings 5, 4, (3)!, 2, 1. The score is divided into two sections by a double bar line. The first section is for the A minor prelude, and the second section is for the E minor prelude. The A minor prelude starts at measure 1 and ends at measure 22. The E minor prelude starts at measure 1 and ends at measure 25. The A minor prelude has a key signature of one flat (B-flat) and a time signature of 4/4. The E minor prelude has a key signature of one flat (B-flat) and a time signature of 4/4. The A minor prelude has a tempo marking of 'Prelude' and a dynamics marking of 'p'. The E minor prelude has a tempo marking of 'Prelude' and a dynamics marking of 'p'.

Example 5.9a

A minor Prelude E minor Prelude

[015] Dies Irae [025] [025]

A: $\hat{2} \cdot \hat{3}$ E: $\hat{5} \hat{6}$

Fingering: 4 5 4 4 5 4 3 3 4 Antecedent Consequent

ic1 ic1 ic2

(F⁴) E: vii → IV⁶ II₃

A: V₄⁶

The image shows a musical score for two preludes. The first section is labeled 'A minor Prelude' and the second 'E minor Prelude'. Above the staves, there are brackets labeled [015], Dies Irae, [025], and [025]. Below the staves, there are various annotations including fingering (4 5 4, 4 5 4 3 3 4), intervallic patterns (ic1, ic2), and harmonic analysis (A: V₄⁶, E: vii → IV⁶, II₃). The score is written for piano with a treble and bass staff. The A minor prelude starts with a treble staff and a bass staff. The E minor prelude starts with a treble staff and a bass staff. The score is divided into sections by double bar lines. The first section is labeled 'A minor Prelude' and the second 'E minor Prelude'. Above the staves, there are brackets labeled [015], Dies Irae, [025], and [025]. Below the staves, there are various annotations including fingering (4 5 4, 4 5 4 3 3 4), intervallic patterns (ic1, ic2), and harmonic analysis (A: V₄⁶, E: vii → IV⁶, II₃). The score is written for piano with a treble and bass staff. The A minor prelude starts with a treble staff and a bass staff. The E minor prelude starts with a treble staff and a bass staff. The score is divided into sections by double bar lines.

Example 5.9b

13 16 18 19 21 23 24 25

[025]

A F# F#4 (F#4) F#3 E

^5 ^4 ^2 (42) ^2 ^1

A E F#

[015]

6/3 6/3 6/5 7# b7 4/2 6/3 5/4 #

C B C A

Dies Irae

I IV V V7 (bII6) V I

[025]

A E F# F#

[015]

A E F#

10 11 12 14 15 16

C B C A

Dies Irae

The musical score is written for a single melodic line on a treble clef staff. It is divided into two systems. The first system covers measures 13 to 25, and the second system covers measures 10 to 16. The key signature is one sharp (F#). The score includes various musical notations such as notes, rests, slurs, and ties. Above the staff, there are several annotations including measure numbers, chord symbols (A, F#, F#4, (F#4), F#3, E), and fingerings (^5, ^4, ^2, (42), ^2, ^1). Below the staff, there are more annotations including measure numbers, chord symbols (C, B, C, A), and the text 'Dies Irae'. The score also includes a series of numbers (6/3, 6/3, 6/5, 7#, b7, 4/2, 6/3, 5/4, #) and a series of letters (I, IV, V, V7, (bII6), V, I). The score is annotated with [025] and [015] in several places.

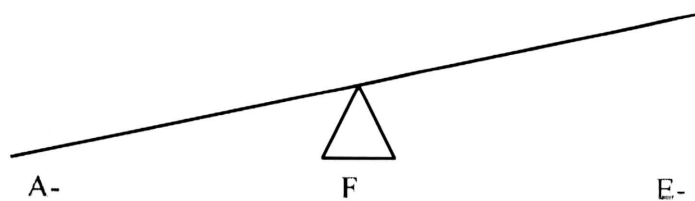
Example 5.10

27. *Andantino* Op. 41, No. 2

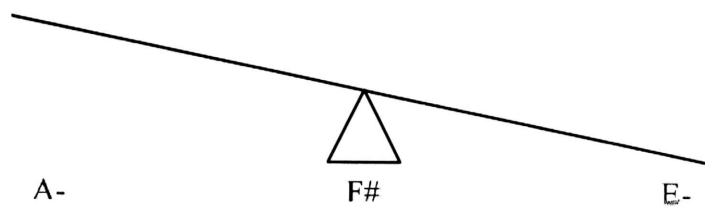
The musical score is for a piano piece, Op. 41, No. 2, starting at measure 27. The tempo is marked *Andantino* and the dynamics are *p* (piano). The key signature is one sharp (F#), and the time signature is 3/4. The score is written for piano (p) and consists of three systems of music. The first system includes a diagram with a horizontal line and four vertical stems labeled 5, 4, 2, and 1 from left to right, with a caret (^) above each number. The music features arpeggiated chords and sixteenth-note patterns in the right hand, with a steady bass line in the left hand. Fingering numbers (1-5) are provided for many notes.

Example 5.11

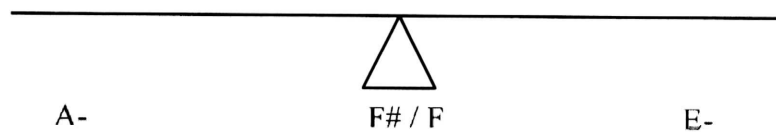
A minor Prelude



E minor Prelude



Mazurka



Example 5.12